

七 下 田 石 工
 (77)

[illegible]

FEATURES	Location/Qualifiers
source	1..1062 /organism="Homo sapiens" /db_xref="taxon:9606"
gene	1..1062 /gene="tissue inhibitor of metalloproteinase 2, TIMP-2"
CDS	271..933 /gene="tissue inhibitor of metalloproteinase 2, TIMP-2" /note="This sequence comes from 6-7; TIMP-2" /codon_start=1 /product="tissue inhibitor of metalloproteinase 2" /db_xref="PID:9296202"

			/translation-"MGAAARILRALALLLATLRADACSCSPVHPQOAFCAADV IRKASKEVEDSGNDIYGRNPIRLOIEIOIKFKEPEDIETIYASSAVGVSII DVGGKEEYLLAGRAEDGKKHITLCDIVPRDITSLTOKSLNRHYOMGCCCKITREB MICYISSPDECIIMDMWTEKNINGHOAKFPACIKRSDSCAMTRGAAPROEFUDIE	
BASE COUNT	222 a	370 c	316 g	154 t
ORIGIN	Dp ^a			
Query Match	57.3%;	Score 599;	DB 28;	Length 1062;
Best Local Similarity	89.6%;	Pred. No.	0.00e+00;	
Matches	706;	Conservative	0;	Mismatches 77; Indels 5; Gaps 1;
Dp	245	CCGCGCCCCCAGCCCGCCCGCCGCATGCGGGGGCCGCGCCGACCCCTGCGGTGGCGC	304	
Oy	263		322	
Dp	305	TGCGCTCTCTGCTGCTGGAGCAGCTGCTTCGCGCCGCGACGCTCGACACTGCTCCCGG	364	
Oy	323	tctgctctctgtctgttgggaagcgtctcccccggcgacgcctgcagctgtctccccg	382	
Dp	365	TGCAACCCGCAACAGGCGCTTTTGCAATGCAGATGTGTGATCAGGGCCAAAGCGGTACGTG	424	
Oy	383	tgcaaccgcgaacaggcgtttctgcaatgcaagaatagtatcacggcgcaaacagactaca	442	
Dp	425	AGAAGAGTAGTGACTCTGGAACAACGACATTATGAGCACCCCTTACAGAGATCCAGTATG	484	
Oy	443	agaaggaagtgtgaaccttcgtgcaacgacacattcaaggcaacccaacaaagcgattcagta	502	
Dp	485	AGATCAACACATAAAGATGTTCAAAGGGCCCTGCAAGAGATATTAGATTATCTACACGG	544	
Oy	503	agatcaagcagataaagaatgttcaaagggaacctgcatacgaagcactagaatttatcta	562	
Dp	545	CCCCCTCCTCGGCACTGTGTGGGGGTCTGCTGGCTGGACGTTGGAGAAAAGAAATATCTCA	604	
Oy	563	coccgcgcgtgcgt	622	
Dp	605	TTGCGAGAAAGGCCAGGGGGGAGCGCAAGATCACATACCCCTGACTCATCATGTCG	664	
Oy	623	ttgcagggaagagccgaggggaatgtgcaatalagcatcacccctcgtgtcttcatatcg	682	
Dp	665	CCTGGACACCCTTGAGCACACCCAGAAAGAAAGCCTGMAACCAACAGGTACAGATGGGCT	724	
Oy	683	cctgggaacacctgt	742	
Dp	725	GCGAGTGCACAGTACACGCGCTGCCCATGATCCCGTCTACTATCTCTCCCAGACGAGT	784	
Oy	743	gtgaagtgcgaagctactcgtatgcccatgatcccatcttcatcatctctctccgagag	802	
Dp	785	GCCTTGATGATGACTGGGTGCACAGAGAGAATAATCAACGGGCAACAGGCAAGTTTGTG	844	
Oy	803	goccttgtatgtgactcgt	862	
Dp	845	CCTGATCAAGAGAGTGAAGGCTCCTGTGCGTGTGATACCGCGCGCGCGCCGCCAACG	904	
Oy	863	cctgatatcaagaagagcgaagcgtctcctgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgt	922	
Dp	905	AGGAGTTTTCTGCATCTCGAGGACCCATTAAGCAGGCGCTCCAAAGCCCTTGCCCACTCG	964	
Oy	923	aggaatttcttgacatctgagagcccgtaaagcagccacaggaactccttgyggcaaatg-	981	
Dp	965	AAAAAAGCCTTCGAAGGTTTGTGACTGGTTCAGGCTGTGACATTCCTCTCTGGAAACAGA	1024	
Oy	982	----acagtgtcacaagagttcagatgtgtccagcttcgcacattccctcttgcacacaga	1037	
Dp	1025	TGAATAAA 1032		
Oy	1038	tgaataaa 1045		
RESULT LOCUS	4 HUMTIMP2 1062 bp mRNA PRI 14 -JAN-1995			
DEFINITION	Human metalloproteinase-2 inhibitor (TIMP-2) mRNA, complete cds.			

[illegible]

OY	623	ttgcaggaggaagccgagggaaatgcaataatgatcatatcacctctgtgattcattcgtc
Db	665	CCTGGACACCCTTGAGACACCAACCAAAAGAAGGCTGAACACACAGTACGATGGGCT
OY	683	ccctggacacccttgagtgccccagaagaagacctgacacacagtgatcagaatggct
Db	725	GCGAGTCAGATCAGCCGCTGCCCATATATCCGTGTGCATCTCTCCCGGACGAGT
OY	743	gtgtagtgaagtactcgtatcgagaaagaatacaacagacagacaggccaagtcttcg
Db	785	GCCCTCTGGATGACTGGGTGCACAGACAGAACATCAACAGGGCACAGGCCAAGTTCTTC
OY	803	gccctctgtagtactggttacaaggaaagaatacaacagacagacaggccaagtcttcg
Db	845	CCTGCATCAAGAGAGAGACGGCTCTGTGGCTGATCCGGGGGCGGGCCCCCAAGC
OY	863	ccctgaccaaagaagaagcgaagcgtctcgtcctgtgtaacggcgaagacaccccaga
Db	905	AGGAGTTTCTGCACATCGAGGAGCCATAAGACAGGCGCTCCAAGCGCCCTGTGGCACTGC
OY	923	agsgattctgcgacatcgagggaccgtaaagcagcgcacacagatcctccgggccaattg-
Db	965	AAAAAAAGCCTCCCAAGGGTTTGACTGCTGCTGCAGCTCTGACATCCCTTCTCGGAACACA
OY	982	---acagtgctcaagaagtacagactgtgcctcagctccgacatccttctctgacacagca
Db	1025	TGATATAA 1032
OY	1038	tgaataaa 1045
RESULT LOCUS	5	S82718 1007 bp mRNA ROD 12-MAR-1997
DEFINITION		TIMP-2-testicular tissue inhibitor of metalloproteinases-2 [rats,
ACCESSION		Sprague-Dawley, testes, mRNA, 1007 nt].
NID		S82718
KEYWORDS		91861813
SOURCE ORGANISM		Rattus sp. testis Sprague-Dawley.
REFERENCE		Rattus sp. Rattus sp. Eukaryoteae; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
AUTHORS		1 (bases 1 to 1007)
TITLE		Grima,J., Calcano,R. and Cheng,C.Y.
JOURNAL MEDLINE		Purification, cDNA cloning, and developmental changes in the steady-state mRNA level of rat testicular tissue inhibitor of metalloproteinases-2 (TIMP-2) (1996)
REMARK		J. Androl. 17 (3), 263-275 (1996) 93684329 Genbank staff at the National Library of Medicine created this entry [NCBI g19b5g 179018] from the original journal article. This sequence comes from Fig. 2A.
FEATURES		Location/Qualifiers
source		1..1007
gene		/organism="Rattus sp." /db_xref="taxon:10118"
CDs		219..881 /gene="TIMP-2" 219..881 /gene="TIMP-2" /note="testicular tissue inhibitor of metalloproteinases-2; this sequence comes from fig. 2A" /codon_start=1 /product="TIMP-2" /db_xref="PID:g1861814" /translation="MGAASRLALGLILIAITLAPNACSCSVVHQAFQANADV IRAVNSKEVDSSNDITGPRIKRIOTELKOIMRGPDKDIEFTIAPSSAVCGVSII DVGGKEKLINGABGDGKAHITLCPIVPMPLSTOKRSINHRYONGCECKTKTRPEE MIPTCISSPECILMMWVTEKSLNGHQAEFACIKRSDSCAMYGNAIPROEFLDIE DP"

QY	821	tcacggagaagaacatcacaaggaacacgaagcttccttcgctgatacaagaagcg	880
Db	822	ATGCTTCTGCGCTGTGCTACCGCGGGGCGACCCCGAAGACAGAGATTTCTTGACATCG	881
QY	881	acgcctctgagctcgtgacccgcgagacagaccccccaagcagagttctctgacatcg	940
Db	882	AGGACCCCTAAGCAGAGCGCTGACAGAGACCCCTCTGTGGCCCATTTGAAACACCTCTAGGGTTC	941
QY	941	agagccctgaacgacgagccaccacg-gactcctggggccaatgaca-gtgcacaaggttc	998
Db	942	AGACTGGTCCAGCTTTGACATCCCTTCCTGGAAACAGATGAATAAA	998
QY	999	agaactgtccagctccgacacatcccttctctgtgacacagatgaataaa	1045
RESULT	7	RND14526	969 bp
LOCUS			MRNA
			ROD
			21-SEP-1994
TITLON			Rattus norvegicus tissue inhibitor of metalloproteinases-2 mRNA
ACCESSION			(TIMP-2) mRNA, complete cds.
NID			U14526
KEYWORDS			9540204
SOURCE			Norway rat.
ORGANISM			Rattus norvegicus
REFERENCE			Eukaryotic; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae; Murinae; Rattus.
AUTHORS			1. (bases 1 to 969)
TITLE			Cook,T.F., Burke,J.S., Bergman,K.D., Quinn,C.O., Jeffrey,J.J. and
JOURNAL			Partridge,N.C.
MEDLINE			Cloning and regulation of rat tissue inhibitor of
REFERENCE			metalloproteinases-2 in osteoblastic cells
AUTHORS			Arch. Biochem. Biophys. 311 (2), 313-320 (1994)
TITLE			94263207
JOURNAL			2 (bases 1 to 969)
			Partridge,N.C.
			Direct Submission
			Submitted (08-SEP-1994) N.C. Partridge, Saint Louis University
			School of Medicine, Department of Pharm. and Physiol. Sci., 1402
			South Grand, St. Louis, MO 63104, USA
FEATURES			Location/Qualifiers
Source			1..969
			/organism="Rattus norvegicus"
			/strain="Sprague-Dawley"
			/db_xref="taxon:10116"
			/clone="PRT4"
			/clone_lib="UMR 106-01 library of N.C. Partridge"
			/cell_line="UMR 106-01 rat osteosarcoma"
			/cell_type="osteoblast"
			/tissue_type="bone"
			1..208
			209..871
			/note="TIMP-2"
			/codon_start=1
			/product="tissue inhibitor of metalloproteinases-2"
			/db_xref="pid:9540205"
			/translation="KGAARTLALAGLLATLPLPADSCSPVHPQACNMAD
			IRAKNASEKEDVSGNDIYGPPIRIQRIETKQIMFEGPDKDIEFITAASSVCGV
			DVAGKEKYLIAAGAEADGKMHITLCDFIYPMWDLSTORKSLNHRQCCOCKIRIN
			MICVYISSPDECLMDMWTEKSIHQAFACIKRSDSCAWYRGAAPKQEFLLD
			DP"
			287..868
			/product="tissue inhibitor of metalloproteinases-2"
			872..969
			961..966
			298 c
			289 g
			171 t
mat_peptide			
3/UTR			
polyA_site			
BASE COUNT			
ORIGIN			
Query Match			55.2%; Score 577; DB 14; Length 969;
Best Local Similarity			88.0%; Fred. No. 0.00e+00;
Matches			674; Conservative 0; Mismatches 91; Indels 1; Gaps 1;

D	201	CGCCCCGCATGGGCGCCGCCGCCGACAGCTCCGGGCTTGCGGCTTCTGTCTGTGG	260
Q	281	Cgcccgcacatcggcgccgccccgcagctcgcgtcgcgttcctcctcctcgtctg	340
D	261	CCACGTCGCTCCTCGCCGCGGAGCCCTGCAAGCTGCTCCCGGNGCACCCGCAACAGCCGT	320
Q	341	ggacgcctgcctccccggcgccgaagcctgcagcctgcctcccggtgcaccgcccaacaggcgt	400
D	321	TTTGCAATGCAGACGTATGATCATCGGGCCCAAAGCAGACGAGAACGAGTAGTGGATTCCG	380
Q	401	ttagcatgcagaatactatgatcgcggccaaagcaatcataagaaggagtgtgactctg	460
D	381	GGAATGACATCTATGSCAACCCCATCAAGAGGATTTCAATATGAGATCAAGCAGATAAAGA	440
Q	461	gcaacgacatcctaagcaaacccccaacgaagtgattcagtatgatcaagcagataaaga	520
D	441	TGTTCCAAGAGACTCGACAAAGGACATCTCAATTTATCTACAGGCCCTCTCTCAGCACTGT	500
Q	521	tttccaaggcgacctgcagtaagacaataagattatctcacagacccccgcgcgtgcgtgt	580
D	501	CGGGGCTCTCCTCGAGCTTGAGAGAAAGAAATCTCAATATGACGGGAAGCGCGAAG	560
Q	581	gtggggtctcgtcgtgaacattcggagaagaagagctccatctgcacgggaagggccgagg	640
D	561	GAGATGGCAAGACTGCACATTACCCTCTGTGACTTTATTTGTCCTCGGAGACGCTTAGCA	620
Q	641	ggaatgcaatatgcatatacacccctctgtacttcatcgtgccttggagacacctgagt	700
D	621	TCACCCAGAGAGAAAGCCTTAACACAGGATACAGATGGGCTGCAAGATCATCAC	680
Q	701	ccacccagaaagaagacctgaaccacacagatcacagatgggctgtgagtgaagatacttc	760
D	681	GCTCCCTATATACCATGCTACATCTCCCTCCCGGATGAGTGCTGTGGATGAGACGGG	740
Q	761	gagucccaatgacatccatgcacatccctcccgagcgagtgcccttgcgtatgcagcggg	820
D	741	TCAACAGAGAGAGCATCAATGGGAGCCAGGCCCAAGTTCTTGCTGCATCAAGAGATG	800
Q	821	tcaagaggaagaataatacaacgagacaccaaagcttcctcgcgtgataaagaagaagcg	880
D	801	ATGGTTCTTGCGCGTGTGTACCGCGGGGCGCACCCCAGGAGAGAGATTCTTGACATCG	860
Q	881	acgctcctcgtgcgtgttacgcggagcagaccccccaagcagaggtttcttgacatcg	940
D	861	AGGACCCGTAGACGGCTGACAGAGCCCTCGCGCCCAATTGAAAAGCCTTGAGGGTTCA	920
Q	941	aagaccctgaagcagagccaccagagctcctcggggccaatggaaa-gtgtccaaagatca	999
D	921	GACATGTCACAGCTTGACATCCCTCTCTGGAACAAGCATCAATAAA	966
Q	1000	gactggtccagctccgcagatccctctccttgagacacagcatgaataaa	1045
RESULT LOCUS	8	MGSTIMP2A	1695 bp mRNA ROD 14-JAN-1992
DEFINITION	Mouse t1ssue inhibitor (type 2) of metalloproteinases (TIMP-2)		
ACCESSION NID	M82858 9202051		
KEYWORDS	extracellular protein; matrix metalloproteinase inhibitor; tissue inhibitor of metalloproteinase.		
SOURCE	Mus musculus (strain BALB/c, sub-species domesticus) (library: lambda g11) embryo cDNA to mRNA.		
ORGANISM	Mus musculus		
REFERENCE	Eukaryotes: mitochondrial eukaryotes; Metazoa: Chordata; Vertebrata: Eutheria; Rodentia; Sciurognathi; Myomorphia; Muridae; Murinae; Mus.		
AUTHORS	Shimizu,S., Malik,K., Sejima,H., Kishi,J., Hayakawa,T. and Koike,O.		
TITLE	CDNA sequence of mouse TIMP-2		

[illegible]

Db	64	CGCGTCTCGGCGCCGCGAGCCCTGACGTCGTCCTCCGGGAGCAACCCGACAGGCGTTT	123
Qy	344	cgcctctcccccgggccggaagccctgcagctcgcttcccggctgacccgcaaaagcgctt	403
Db	124	GCAATCGACAGCGTGTGTATCGATCAGAGCCCAAGACAGTGTAGCGAAGAGAGTGGATTCCGGGA	183
Qy	464	acgacatctacggaaccccccaagcggatctcagttcagttcagttacgaagataaagatgt	523
Db	184	ATGACATCTATNGGCAACCCCATCAAGAGGATTACGTTATGAGATCAACACATAAAGATGT	243
Qy	404	gcaatcagacatatgtatcctagcaggccaaagcagttcaataaagaaggtgactcttgca	463
Db	244	TCAAAGAGCCTGACAAAGAACATCATCAGTTTATCTACACAGGCCCTCTCTGACAGTGTGCG	303
Qy	524	tcaagggaccgcgacacaggaactagatgttatctacacagccccgcgcgcgtgtgtgtg	583
Db	304	GGGTCTCGCTGGACGTTTGAGGAAAGAGAGATATCTAATTGACAGAAAGCGAGAGAG	363
Qy	584	gggtctcgtgacatctggaagaaagaagatctcattctcagtgaggaagccggaaggga	643
Db	364	ATGGCAAGATCGACATTAACCTCTGTGTACTTTCATCTGTGCGCTGGGAAACGCTTAGCATCA	423
Qy	644	atggcaaatcgcatacaaccctctgtacttcatcgcgtccctggagacacctgtgagtcga	703
Db	424	CCCAAGAAAGAGCCTGAGACACAGGATGACAGATGGGCTGTGATGCAATCATCTGCT	483
Qy	704	ccccgaagaagaagctcgtgacacacagcagatcggctgtgtgagtgaaatcactcgat	763
Db	484	GTCCTCATGATCCCTTGCTACTATCTCTCTCCCGGATGAGTGCCTCTGTGATGAGCTGGTCA	543
Qy	764	gcccattgatcccatctacatccctctccgcgcgagtgctcttgatgtgacttggctca	823
Db	544	CAGAGAAGAGCATCAATNGGCGACACAGGACCAAGTTCTTCGCTGATGAGAGAAAGTATG	603
Qy	824	cggagaaagaatcatcaagcagacacagcagcgaagttcttcgctgatacaagaagcgagc	883
Db	604	GTTCTTGGCGCTGTGTACCGCGGGGCGGACACCCCAAGCAAGATTTCTTGACATCTCAGG	663
Qy	884	gtctctgacctgtgtacccggagcagacaccccccaagcagagttcttgactcagag	943
Db	664	AACCATTAAGCAGG 676	
Qy	944	accgtaagcag 956	
RESULT	12		
LOCUS			
DEFINITION	C. longicaudatus mRNA for tissue inhibitor of metallo proteinase.		
ACCESSION	X75924		
NID	9414876		
KEYWORDS	Tissue inhibitor of metallo proteinase.		
SOURCE	Long-tailed hamster.		
ORGANISM	Cricetus longicaudatus		
REFERENCE	Eukaryotes; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorphia; Muridae; Cricetinae; Cricetulus.		
AUTHORS	Suzuki, Y.		
JOURNAL	Unpublished		
TITLE	2 (bases 1 to 597)		
JOURNAL	Suzuki, Y.		
FEATURES	Direct Submission		
SOURCE	Submitted (02-NOV-1993) Y. Suzuki, Suntory Pharm-Tech Center, 370-05 Azaaya 2716, Chiyoda-machi, Ohira-gun, Gunma, JAPAN		
	Location/Qualifiers		
	1..597		
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	/clone="K1"		
	/cell_type="ovary"		

CDS

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/codon_start-3

/product-"tissue inhibitor of metaro proteinase"

/db_xref="PID:9414877"

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CDFTIVPMDTSTOKSLNHRVOMGCECKITRCMPICITISSPDECLMDWVTEKSI
GHAKRFACIKRSDSCAMTRGAAPPRKPEFLIEDP"

primer_bind 1. .35

primer_bind 9. .590

mat_peptide 9. .590

BASE COUNT 160 a 163 c 167 g 107 t

ORIGIN

Query Match 46.1%; Score 482; DB 14; Length 597;

Best Local Similarity 91.3%; Pred. No. 0.00e+00;

Matches 533; Conservative 0; Mismatches 51; Indels 0; Gaps 0;

nb 6 GCCGCAAGCTGCTCCCGGTCACACCCGACAGCGCTTTTCATGACAGCTAGTATC 65

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364 gctgcagctcgtcccggtgacccgcaacagcgcttgcacatgacatagatgac 423

|||||

66 AGGCGCAAGAGTAAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 125

|||||

424 agggcacaagcagcaatagaagaagagtgagctctgcacagacacacacacccc 483

|||||

126 ATCAAGAGATCAATATGAGATCAAGAGATCAAGAGATCAAGAGATCAAGAG 185

|||||

484 atcaagagatcagatagatgacatagaagatgacatagaagacacacacacac 543

|||||

186 ATGAGATTATCTACAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 245

|||||

544 atgagattatctacagagagagagagagagagagagagagagagagagagag 603

|||||

246 GAAAGAGAGAGATCAATATGAGATCAAGAGAGAGAGAGAGAGAGAGAGAGAG 305

|||||

604 gaaagagagagatcattcattgcagagagagagagagagagagagagagagag 663

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306 CTCTGACTTACTTGTGCTGCTGAGACACTGACACACACACACACACACACAC 365

|||||

664 ctctgacttacttgtgctgctgagacacctgagtgcaacacacacacacacacac 723

|||||

366 CACAGGATCAAGATGAGCTGAGAGATCAAGAGATCAAGAGATCAAGAGATCA 425

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724 cacaggatcagatgagctgagagatcagatcagatcagatcagatcagatc 783

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426 ATCCCTCCCGGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 485

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784 atccctcccgatgagtgagtgagtgagtgagtgagtgagtgagtgagtgagtg 843

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486 CACAGGATCAAGATGAGCTGAGAGATCAAGAGATCAAGAGATCAAGAGATCA 545

|||||

844 cacaggatcagatgagctgagagatcagatcagatcagatcagatcagatc 903

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546 GAGAGGACACCCCTTAAGAGAGAGATGAGAGATGAGAGATGAGAGATGAGAG 589

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904 gagagagacaccccttaagagagagatgagagatgagagatgagagatgag 947

|||||

RESULT 13

LOCUS HSTIMP2M 555 bp RNA PRI 24-APR-1992

DEFINITION H.sapiens mRNA for tissue inhibitor of metalloproteinases, Type-2.

ACCESSION X54533

IID 937180

KEYWORDS TIMP-2; tissue inhibitor of metalloproteinases, Type 2.

SOURCE human.

ORGANISM Homo sapiens

Eukaryotes; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Primates; Catarrhini; Hominiidae; Homo.

REFERENCE 1 (bases 1 to 555)

AUTHORS Malik, K.T.A.

TITLE Direct Submission

JOURNAL Submitted (20-AUG-1990) Malik, K.T.A., Biotechnology Division, Fujii Chemical Industries, 530 Chokelji, Takaka City, Toyama 933, Japan

REFERENCE 2 (bases 1 to 555)

AUTHORS Malik, K., Seijima, H., Aoki, T., and Iwata, K.

TITLE Nucleotide sequence of a TIMP-II cDNA

JOURNAL Unpublished

FEATURES

source

1. .555

/organism="Homo sapiens"

/db_xref="taxon:9606"

/cell_line="GIN-1"

/clone_lib="human fibroblast"

1. .20

/gene="TIMP-2"

/note="cloning primer-derived (5')"

<1. .555

/gene="TIMP-2"

/codon_start-1

/product-"tissue inhibitor of metalloproteinases, Type-2"

/db_xref="PID:937181"

/db_xref="SWISS-PROT:P16035"

/translation-"SPVHPQAFNADVIYRAKAVSEKVDNDIYGNPIKRI
IOYEIKRMKRGKDIETITAPSSVGVSLDVGKREYILAKABDGMHTLCPFI
PMDTSTOKSLNHRVOMGCECKITRCMPICITISSPDECLMDWVTEKSI
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1. .555

/gene="TIMP-2"

547. .555

/gene="TIMP-2"

/note="cloning primer-derived (3')"

BASE COUNT 147 a 148 c 159 g 101 t

ORIGIN

Query Match 43.3%; Score 452; DB 27; Length 555;

Best Local Similarity 90.8%; Pred. No. 0.00e+00;

Matches 503; Conservative 0; Mismatches 51; Indels 0; Gaps 0;

Db 1 TCTCAATGACACCCACACAGAGCGCTTTTCATGAGATGATGATGATGATGATG 60

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376 tcccggtgacccgcaaaagagtggttgcacatgacatagtgacagggcacaaga 435

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61 GTCAATGAGAGAGATGAGCTGAGAGATGAGAGATGAGAGATGAGAGATGAGAG 120

|||||

436 gtcaatgagagagatgagctgagagatgagagatgagagatgagagatgagag 495

|||||

121 CAGTATGAGATCAAGAGATGAGAGATGAGAGATGAGAGATGAGAGATGAGAG 180

|||||

496 cagtatgagatcagagatgagagatgagagatgagagatgagagatgagagat 555

|||||

181 TACACGACCCCTCTCGGTAGTGTGGGGTCTCACTGAGAGTGGAGAGAGAGAA 240

|||||

556 tacacgacccctctcggtagtggtggtggtggtggtggtggtggtggtggtggt 615

|||||

241 TATCTATGAG 300

|||||

616 tatctatgag 675

|||||

301 ATGCTGCTCGGACACCCCTGAGACACACACACACACACACACACACACACAC 360

|||||

676 atgctgctcggacacccctgagacacacacacacacacacacacacacacacag 735

|||||

361 ATGAGCTGAGAGAGATCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 420

|||||

736 atgagctgagagagatcagatcagatcagatcagatcagatcagatcagatcag 795

|||||

421 GAGAGTGGCTCTGAGTGAATGAGTGAATGAGTGAATGAGTGAATGAGTGAATG 480

|||||

796 gagagtggtctgagtgagtgagtgagtgagtgagtgagtgagtgagtgagtg 855

|||||

481 TTCTTGCTGATCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 540

|||||

856 ttcttgctgatcagaagaagagagagagagagagagagagagagagagagagag 915

RESULT	14	AF004664	814 bp	mRNA	VRT	03-SEP-1997
LOCUS						
DEFINITION						
ACCESSION						
MID						
KEYWORDS						
SOURCE						
ORGANISM						
REFERENCE						
AUTHORS						
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[illegible]

MRNA	join(U04381:2244..2669,U04382:55..155,U04383:84..192, U04384:195..319,546..853)
CDS	/gene="TIMP-2" /product="tissue inhibitor of metalloproteinases-2" join(U04381:2546..2669,U04382:55..155,U04383:84..192, U04384:195..319,546..743) /gene="TIMP-2" /function="inhibitor of matrix metalloproteinases activities" /codon_start=1 /evidence=experimental /product="tissue inhibitor of metalloproteinases-2" /db_xref="pid:g1517893" /translation="MGAARTLRALGHLPLPPADACSPVHPQAFQADVYR AKAASEKVDSDNDYGNIPKIRIQYEIKQIMFGEKPEIDFITYPASSAVGSLLV GKREYILAGRAEDGKMTILCDFIYMDPLSTQKRSLNHRIROMGECKITFCPMI PCYSESPDECLMDWYETKKNINGHQAFKACIKRSDSCAWYRGAAPPKQFLIEDP
intron	>1..545 /gene="TIMP-2" /number=4 546..853 /gene="TIMP-2" /number=5 744..853 /gene="TIMP-2" 837..842 /gene="TIMP-2"
3'UTR	polya_site
BASE COUNT	275 a 432 c 360 g 300 t
ORIGIN	
Query Match	19.7%; Score 206; DB 28; Length 1367;
Best Local Similarity	88.6%; Pred. No. 2,67e-18;
Matches 265; Conservative 0; Mismatches 29; Indels 5; Gaps 1;	
Db 544 AGATCAGCGGCGCCCATCGATCCGCTGCTCATCTCCGCCCGGACAGAGNCCCTGGA 603 	
QY 752 agatcacctcgatgcccatcgtaccatccatctccctcgcgagatgctctcgtga 811 	
Db 604 TGGACTGGGTCACAGAGAAGAACATCAACGGGCGACCGAGCCAGCCAAAGTCTTCCGCTGCATCA 663 	
QY 812 tggactggtgtcgcgagagaacatcaacgagacacagcgcaagttcttcgcgtcatca 871 	
Db 664 AGAGAAAGTACAGGCTCTCTGTGCGTGTGACCCGGCGCGCGGCCGCCCAAGCAGAGATTTC 723 	
QY 872 agagaagcgaagcggtctcgtcgcgtgtacgcgcgagcagaccccccaagcagagatttc 931 	
Db 724 TCGACATGAGGAGACCCATAGAGGCGCTCCCAAGCGCCCTGTGGGCCCACTGCCAAAAAAGC 783 	
-X 932 tggacatcgaagaccgcaagcagccacaggaactccttgggccaattg----acagt 986 	
Db 784 CTCCAAGGGGTTTGCATGTGTCACCTTGACATCCCTTCCCTGGAACAGCATGAATTAA 842 	
QY 987 gtccaaggttcagactcgttcagatccggaactcccttcttcggaacacgcatgaataa 1045 	

Search completed: Mon May 4 12:33:37 1998
Job time : 2976 secs.

Oy	421	atcagggcccaagcagatcaataagaagagvggagctctgagcaagacatcttaogcgaac	480
Db	481	cccatcaagcggatcttcagtactgagatcaagcagataaagatgttcaagggacctgatacag	540
Oy	481	cccatcaagcggatcttcagtactgagatcaagcagataaagatgttcaagggacctgatacag	540
Db	541	gacataagattatctaacacagaccccccgcgcgtgtgtgtggtctctgctgacatt	600
Oy	541	gacataagattatctaacacagaccccccgcgcgtgtgtgtggtctctgctgacatt	600
Db	601	ggaggaagaagaagagatctccatctgacagggaagcccggaagggaatgagcaatatgatac	660
Oy	601	ggaggaagaagaagagatctccatctgacagggaagcccggaagggaatgagcaatatgatac	660
Db	661	aacctctgtactatcatcgtgcctctggagacacacctgagtgccaccacagaagaagacctg	720
Oy	661	aacctctgtactatcatcgtgcctctggagacacacctgagtgccaccacagaagaagacctg	720
Db	721	aaccacaggtatcacagatgvgcgtgtgagatgcaagatacctcgatgcccatgataccatgac	780
Oy	721	aaccacaggtatcacagatgvgcgtgtgagatgcaagatacctcgatgcccatgataccatgac	780
Db	781	tacatccctctctcggagcaggtgcccctctgagatgagatggtgtaacggagaagaatac	840
Oy	781	tacatccctctctcggagcaggtgcccctctgagatgagatggtgtaacggagaagaatac	840
Db	841	ggacacacagggccaagatgtcttcgcctgcatcaagaagaagcagagctctcgtcgtgtac	900
Oy	841	ggacacacagggccaagatgtcttcgcctgcatcaagaagaagcagagctctcgtcgtgtac	900
Db	901	cgcggagcagacaccccccaagcagaggttctctgagatcgagagacccgtaaagcagagccac	960
Oy	901	cgcggagcagacaccccccaagcagaggttctctgagatcgagagacccgtaaagcagagccac	960
Db	961	caggacccctggggcgcacattgacagatgtccaaagatgtaagctgacgtccgcgaacac	1020
Oy	961	caggacccctggggcgcacattgacagatgtccaaagatgtaagctgacgtccgcgaacac	1020
Db	1021	ccttcctggaacacagcagcatgataaa	1045
Oy	1021	ccttcctggaacacagcagcatgataaa	1045
RESULT 3			
ID	006584	standard; DNA; 1033 BP.	
AC	006584;		
DT	21-FEB-1991	(first entry)	
CC	Sequence encoding human metalloproteinase inhibitor.		
OS	Tumour; chemotherapy; cancer; Paget's disease; osteoporosis;		
FS	scleroderma; cholesteatoma; ds.		
FX	Homo sapiens.		
FT	Key	Location/Qualifiers	
FT	CDS	253..912	
FT	/*tag- a		
FT	mat_peptide	331..912	
FT	/*tag- b		
FT	EP-398753-A.		
PD	22-NOV-1990.		
PF	18-MAY-1990; 305433		
PR	19-MAY-1989; US-355027.		
PR	29-MAR-1990; US-501904.		
PA	(AMGE-) AMGEN INC.		
PA	(CHIL-) CHILDREN'S HOSPITAL OF LA.		
PI	Langley KE, Boone TC, Declerck YA;		
DR	WPI: 90-350481/47.		
DR	P-PSDB: R07955.		
PT	New metallo-proteinase inhibitor polypeptide(s) - and DNA		
PT	encoding them, for treatment of tumour cell dissemination and		
PS	rheumatoid arthritis		
CC	Claim 12; Fig 2: 63pp; English.		
CC	Sequence may be used to transform a procarcynotic or eukaryotic		
CC	expression system to give a product with all the biological		
CC	properties of naturally occurring metalloproteinase inhibitor.		

Query Match	Best Local Similarity	57.3%	Score 599;	DB 1:	Length 1033;
Matches 706;	Conservative 0;	Mismatches 77;	Indels 5;	Gaps 1;	
CC	The product has therapeutic use in inhibiting tumour dissemination				
CC	during chemotherapy and radiation therapy, impurged bone marrow cell				
CC	harvesting etc. The inhibitor may also be useful in encapsulating				
CC	tumours aiding clean excision, and in treatment of emphysema, Paget's				
CC	disease, osteoporosis, sclerodema and bedsores.				
CC	The gene product also has application in autoimmune disorders eg.				
CC	Rheumatoid arthritis and multiple sclerosis.				
CC	See also Q06583.				
SO	Sequence 1033 BP;	215 A;	361 C;	305 G;	152 T;
Db	227	ccgccccccgccccccgccccgccccgccccatggcgcgccgccccgccccctgcygcgc	286		
Qy	263	ccggagccccccgccccctccgccccgccccatggcgcgccgccccgccccgagctgcgcgc	322		
Db	287	tcgcctccctctgctctgctggcgagctgtcttcgccccgccccgagctgagctgtcccg	346		
Qy	323	tcctgctctctctgctctgctggcgagctgtctcccccggcgccccgagctgagctctcccg	382		
Db	347	tgccccccgcaacagcgcttttgcacatgacgtatgacatgacgagcgccgaagcgctgacg	406		
Qy	383	tgccccccgcaacagcgcttttgcacatgacgacatgacatgacgagcgccgaagcgacata	442		
Db	407	agaaggaagtgcgactctctggaacgacattatgycgaacccatcaagaggtacacgatg	466		
Qy	443	agaaggaagtgcgactctctggaacgacattatgycgaacccatcaagaggtacgatg	502		
Db	467	agatcaagcagatataaggtgttcaaaaggcctgggaaggtatatagaattatctacacg	526		
Qy	503	agatcaagcagatataaggtgttcaaaaggcctgggaaggtatatagaattatctacacag	562		
Db	527	ccccctccctccgacgt	586		
Qy	563	ccccccgctgcgcgt	622		
Db	587	ttgcagaaagggccgaggggggacggcaaatgacatcacaccctctgtgacttatcg	646		
Qy	623	ttgcagaaagggccgaggggggacggcaaatgacatcacaccctctgtgacttatcg	682		
Db	647	cctggggaacacctgtgac	706		
Qy	683	cctggggaacacctgtgac	742		
Db	707	ggaggtgcaagatcacgcgtctgccccatgacccgtgtactatctctcccccgaagat	766		
Qy	743	ggaggtgcaagatcacgcgtctgccccatgacccgtgtactatctctcccccgaagat	802		
Db	767	gacctgtagtgcacgtgggttcaacagaaagaaacatcaacaggggcaacaggtcttcg	826		
Qy	803	gacctgtagtgcacgtgggttcaacagaaagaaacatcaacaggggcaacaggtcttcg	862		
Db	827	cctgcatcaagaagatgacggtctctgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgt	886		
Qy	863	cctgcatcaagaagatgacggtctctgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgt	922		
Db	887	aggaggttctgcacatcgaggaacccaataaggaagccttcaacgccccgtgtgcaactgc	946		
Qy	923	aggaggttctgcacatcgaggaacccaataaggaagccttcaacgccccgtgtgcaactgc	981		
Db	947	aaaaaagcctcaagaggttctgcacatcggttccagctctacatcccttctctgaaacagca	1006		
Qy	982	----acaggttctcaagaggttctgcacatcggttccagctctacatcccttctctgaaacagca	1037		
Db	1007	tgatataa 1014			
Qy	1038	tgatataa 1045			

QY 414 catagtcatcagcgcccaagcagctacataagaagagctgactctgcacagacatcta 473
 Db 125 tggcaacctatcaagagatccagratagatcaagcagataaagttaaaagggc 184
 QY 474 cggcaacccatcaagcagctatcagatagacagcagataaagatgtcaaggagac 533
 Db 185 tgaagaagatagatattatctacacggccctcctcgcagctgtgtgggtctccgc 244
 QY 534 tgatcagcagacatagattatctacacaccccgctgcgtgtgtgtgggtctccgc 593
 Db 245 ggaagcttgaagaaagaagatattcatctgcagaaagcgaggggagcgagcaagat 304
 QY 594 ggaacatttgaagaaagaagatattcatcttgcagaaagcgaggggagcgagcaat 653
 Db 305 ggaacattcacccttctgtgattatctgtgcctgtggacacccctgaacacccagaa 364
 QY 654 ggaatcacccttctgtgattatctgtgcctgtggacacccctgaagcaccagaa 713
 Db 365 ggaacattcaccacagctacacagatggctgtgcagatcaagcagctgcctcagat 424
 QY 714 ggaacattcaccacagctacacagatggctgtgcagatcaagcagctgcctcagat 773
 Db 425 ccagctgtcatctctcctcccgagcagctgtgcctgtgactgtgtgcacagaaaga 484
 QY 774 ccagctgtcatctctcctcccgagcagctgtgcctgtgactgtgtgcacagaaaga 833
 Db 485 catcaacgggacacagcagcagatcttctgcctgtgcacagaaagagctgtgc 544
 QY 834 catcaacgggacacagcagcagatcttctgcctgtgcacagaaagagcagcgtcgc 893
 Db 545 gggatcaccgagcagcagcagcagcagcagcagcagcagcagcagcagcagcagc 604
 QY 894 cgggtacccgagcagcagcagcagcagcagcagcagcagcagcagcagcagcagc 953
 Db 605 aggcctcacaagcagcagcagcagcagcagcagcagcagcagcagcagcagcagc 663
 QY 954 aggcacacagcagcagcagcagcagcagcagcagcagcagcagcagcagcagc 1008
 Db 664 agctctgacatccctctctctggaacagcagcagcagcagcagcagcagcagc 700
 QY 1009 agctcagacatccctctctctggaacagcagcagcagcagcagcagcagcagc 1045

RESULT 5
 ID 005938 standard; cDNA: 840 BP.
 AC 005938;
 DT 16-JAN-1991 (first entry)
 NE TIMP-2 metalloproteinase inhibitor-encoding clone PSS15.
 matix metalloproteinase inhibitor: TIMP-2; PSS15, ss.
 Synthetic.
 FH Key Location/Qualifiers
 CDS 152..712
 FT /*tag- a
 FT /product-part of TIMP-2
 PN US794796-A.
 PD 21-AUG-1990.
 PF 13-MAR-1990; 494796.
 PR 21-MAR-1989; US-326334.
 PR 17-JUL-1989; US-380431.
 PR 18-AUG-1989; US-395453.
 PR 13-MAR-1990; US-494796.
 PA (USSR) NAT INST OF HEALTH.
 PI Stetler-Sevenson WG, Liotta LA, Krutzsch HC;
 DR P-PSDB: R06896.
 PT New matrix metallo-proteinase inhibitor - used to treat diseases
 PT resulting from matrix metallo-proteinase activity and in
 PT diagnosis, detection and purification.
 PS disclosure; Fig 6a; 54pp; English.
 CC TIMP-2 was isolated from human melanoma cell-conditioned media and
 CC the amino acid sequence determined. A probe was synthesised
 CC based upon the protein sequence information. It was used to screen
 CC a lambdaGem-4 cDNA library prepared from human melanoma cells. 239

CC positives were identified from a total of 750,000 plaques screened.
 CC Further analysis and screening with additional probes eliminated
 CC all but two clones (PSS15 and PSS18). Both were sequenced and found
 CC to encode CSC-21K (-TIMP-2), a novel metalloproteinase inhibitor.
 CC See also US7317407 and W09010228.
 CC See also Q05937, R06746-R06750, R06894-R06895 and Q05939-Q05940.
 SQ Sequence 840 BP; 209 A; 235 C; 218 G; 177 T;

Query Match 48.0%; Score 502; DB 1; Length 840;
 Best Local Similarity 89.3%; Pred. No. 0.00e+00;
 Matches 604; Conservative 0; Mismatches 66; Indels 6; Gaps 2;

Db 136 ctccggggaacagcctcaacagcagctttcgaatgagatgtagtgcagcagcagc 195
 QY 375 ctcccggtgagcagcagcagcagcagcagcagcagcagcagcagcagcagcagc 434
 Db 196 ggtcagtgaaagaaagtgtgactctggaacagcattatgtcaacacctcaagagat 255
 QY 435 agtcaataaagaagagtgtagctctgcaagcagcagcagcagcagcagcagcagc 494
 Db 256 ccagtgatgataaagaagataagatgttcaagagcctggaagagatagaattat 315
 QY 495 tcaatagatcaagaagataagatgttcaagagcagcagcagcagcagcagcagc 554
 Db 316 ctacagggccctcctcctcagcagctgtgtgtgtgtgtgtgtgtgtgtgtgtgtgt 375
 QY 555 ctacacagcccccgcgcgtcgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgt 614
 Db 376 atactcatttgcagaaagcagcagcagcagcagcagcagcagcagcagcagcagc 435
 QY 615 gtactcatttgcagaaagcagcagcagcagcagcagcagcagcagcagcagcagc 674
 Db 436 catcgtgccccttggaacaccccttggaacaccccttggaacaccccttggaacac 495
 QY 675 catcgtgccccttggaacaccccttggaacaccccttggaacaccccttggaacac 734
 Db 496 gatgggtgctgagatgcagatgcagcagcagcagcagcagcagcagcagcagcagc 555
 QY 735 gatgggtgctgagatgcagatgcagcagcagcagcagcagcagcagcagcagcagc 794
 Db 556 ggaagagctgcttgcagatgcagcagcagcagcagcagcagcagcagcagcagc 615
 QY 795 ggaagagctgcttgcagatgcagcagcagcagcagcagcagcagcagcagcagc 854
 Db 616 gtcttcgctgcagatgcagatgcagcagcagcagcagcagcagcagcagcagcagc 675
 QY 855 gtcttcgctgcagatgcagatgcagcagcagcagcagcagcagcagcagcagcagc 914
 Db 676 ccccaagcagagatcttgcagatgcagcagcagcagcagcagcagcagcagcagc 735
 QY 915 ccccaagcagagatcttgcagatgcagcagcagcagcagcagcagcagcagcagc 974
 Db 736 ccaactgcaaaaaagcctcagaggttgcagcagcagcagcagcagcagcagcagc 794
 QY 975 ccaatg-----acaggtcacaagagttcagcagcagcagcagcagcagcagcagc 1029
 Db 795 aaacagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagc 810
 QY 1030 aaacagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagc 1045

RESULT 7
 ID T64341 standard; cDNA to mRNA: 671 BP.
 AC T64341;
 DT 21-MAY-1997 (first entry)
 DE Human small tissue inhibitor metalloproteinase 2 gene.
 KW Human; small tissue inhibitor metalloproteinase; TIMP-2; cancer;
 KW brain tumour; malignant; diagnosis; ds.
 OS Homo sapiens.
 PN J09000265-A.
 PD 07-JAN-1997.
 PF 22-JUN-1995; 156307.
 PR 22-JUN-1995; JP-156307.

DE		Human Natriuretic Peptide Receptor B.
KM	NPRB; ANP; BNP; CNP; kidney failure; heart failure; protein kinase;	
KV	hyperaldosteronism; glaucoma; guanyl cyclase.	
OS	Homo sapiens.	
FH	Key	Location/Qualifiers
FT	Peptide	1..22
FT	/label= signal sequence	
FT	protein	12
FT	/label= mature NPRB	
FT	Domain	23..455
FT	/label= extracellular domain	
FT	/note= "binds natriuretic peptides A, B and C]"	
FT	Domain	456..456
FT	/label= transmembrane domain	
FT	Domain	479..1047
FT	/label= cytoplasmic domain	
FT	/note= "GC and protien kinase activity"	
FT	Modified -site	24..26
FT	/label= N-glycos_site	
FT	Modified -site	35..37
FT	/label= N-glycos_site	
FT	Modified -site	161..163
FT	/label= N-glycos_site	
FT	Modified -site	195..197
FT	/label= N-glycos_site	
FT	Modified -site	244..246
FT	/label= N-glycos_site	
FT	Modified -site	277..279
FT	/label= N-glycos_site	
FT	Modified -site	349..351
FT	/label= N-glycos_site	
FT	Modified -site	600..602
FT	/label= N-glycos_site	
PN	WO9100292-A.	
PD	10-JAN-1991.	
PE	22-JUN-1990; U03586.	
PR	23-JUN-1989; US-370673.	
PA	(GETH) GENENTECH INC.	
PI	Chang M, Goeddel D, Lowe D;	
DR	WPI; 91-036711/05.	
DR	N-PSDB: 010324.	
PT	Natriuretic protein receptor B - for diagnosis and treatment of	
PT	kidney failure, heart failure, hyperaldosteronism, glaucoma etc.	
PS	Claim 3; Fig 1; 49pp; English.	
CC	The sequence was derived from the DNA encoding natriuretic peptide	
CC	receptor B, NPRB, having guanyl cyclase (GC) activity and protein	
CC	kinase activity. The DNA can be inserted into expression vectors	
CC	for the prodn. of the protein, opt. after being mutated to produce	
CC	NPRB analogues. The protein has a mol wt. of 115 kd (calculated Mr-	
CC	114,952). The protein (or variants) can be used in treatment of	
CC	natriuretic peptide disorders, and also to isolate peptides using	
CC	affinity chromatography. Antibodies with affinity for NPRB can	
CC	also be prepd.	
SQ	Sequence	1047 BP; 87 A; 15 C; 83 G; 51 T;
Df	Query Match	6.9%; Score 72; DB 2; Length 1047;
Df	Best Local Similarity	8.5%; Pred. No. 3,60e-27;
OY	Matches	71; Conservative 247; Mismatches 509; Indels 13; Gaps 13;
Df	194 snsnvnhvvarngungnnatlnmrangrnyvncgnnmhmhnaanaarntngdyvn	253
OY	: : : : : : : : : : : : : : : : :	
Df	59 gccgcgccccagcagctcgcttcgctgcgcgcgcagcgcgcgcgcgcgcgc	117
Df	254 yndvngnsnzrgntatgrnndrttrnananraantvrvtylrnnnnnnnnrn	313
OY	: : : : : : : : : : : : : : : : :	
Df	118 gcaaccggacactagaccagaacttgtgtgtgcgagtggaggccgagagagac	177
OY	: : : : : : : : : : : : : : : : :	
Df	314 mrrandvgvnugnsunmnagcnydgnnyavrvnnltinnsgfrdnrvnkmgrry	373
OY	: : : : : : : : : : : : : : : : :	
Df	178 gc	237
OY	: : : : : : : : : : : : : : : : :	
Df	374 hgvtnvvmdknndntldnvwnamgdndsgdnnaahysgaanknwvtgrnnwvxgaan	433
OY	: : : : : : : : : : : : : : : : :	

QY 238 ccaaggcggcgc -ggtacgcccagctccgagccccccgcctccgcgcgcacatggcgc 296

Db 434 sdnnncandndnsckltmstnarvngtgnctnnmgyssnnnnkmmnknnasnmvr 493

QY 297 cgcgcgcgcgaag -ctctgcgcctgcgtcttcgcctccctgcctgcctgctggagcctgcctccc 355

Db 494 nrvnnnnnngsnryhkgagrnctnsnrgs -ygsnnltabgkymnanltghn -kgnvavk 551

QY 356 gggcgcgcgcctgcagctgcctcccggtgcaccgcgcgaacggcggttctgcatgcagaa 415

Db 552 hvnkknnontnrvnnnnkkmrvdvnnhnhtltnagacndnnncvlnrcrgsnnndnnod 611

QY 416 taagtacagggccaaagcagctcaataagaaga -ggtgcactctgcgcgaagcatct -a 473

Db 612 snndnmmyssnnndrvkgnmanhnnsnshgshksncvrvadrvnkhctdygnasnrz 671

QY 474 cgcgcacccccctcaagcggatctcaatgtagatcaagcagataaagaatcttcaaggacc 533

Db 672 aannddnanyakknnntannnsgnnnttgmnaadvysngnnnnnnnansrgnnnyngnd 731

QY 534 tgcacagagactagatgttactaacaagccccgcgcgcgcgtctgctgggtctcgct 593

Db 732 snknnhkvtrngtrnyrnnsndrtlnnnnnnnvnmnrwandaanrdnbnknyrnrmk 791

QY 594 ggcacatgcggagaaagaagatgatactcatgcaggaagcgcgagggagatgcata 653

Db 792 nggtsgndnnnnrmnyaaannnkvnmrthaynnkrrkannanymnnnsvannkrgt 851

QY 654 gcataataccct -ctgt -gaactcactcgtg -cccctggacacccctgagtgcacccagaa 710

Db 852 vnanandsvtnysdnrgatnansanstnmvvnndnylcnadannndvykvtngda 911

QY 711 gaagaagcctgaaccaacagatgcacagatg -ggctgtagtgc -aagatc -atccgatgcc 767

Db 912 ymvysgnngtrgnrthannarmannandaavssnrhrnhdmnrngvhtnvcagvyg 971

QY 768 catgatcccatgcatacatctctctccgcgagcgtgctcctgtagtgcactggatgcagga 827

Db 972 nkmyrcngdvtvtaarmsngnanhknhssttkandnngnnnnngdvnmkygkm 1033

QY 828 gaagaacatacaagcacacagcgaagcgaagtctctgcgcctgataagaagaagcagcgc 887

RESULT	14	
ID	14	
AC	102361	standard; DNA: 820 BP.
DT	29-FEB-1996	(first entry)
T	TIMP-3 clone	TIMP3HCM-3.
M	TIMP-3; tissue inhibitor	metalloproteinase type three; cancer;
K	inflammation; emphysema;	embryo implant modulation; arthritis;
KW	dystrophic epidermolysis bullosa;	peridontal disease; ulcer;
OS	scleroderma; vulnereary;	gene therapy; ss.
EH	Homo sapiens.	
FT	KEY	Location/Qualifiers
FT	CDS	1..495
FT	/tag= a	
PN	W09509918-A1.	
PD	13-APR-1995.	
PF	04-OCT-1994; U11241.	
PR	06-OCT-1993; US-134231.	
PA	(AMGE-) AMGEN INC.	
PI	Koski RA, Silbiger SM;	
DR	WPI; 95-155259/20.	
DR	P-PSDB: R84217.	
PT	New tissue inhibitor metalloproteinase type three - for treating	
PT	cancer, inflammation, emphysema, embryo implant modulation, nerve	
PT	cell disorders, etc.	
PS	Example 4: Page 69-70; 112pp; English.	
CC	CNDA clone TIMP3HCM-3 (T02361) codes for a natural variant	
CC	(R84217) of tissue inhibitor metalloproteinase 3 (TIMP-3), lacking	
CC	a portion of the N-terminus of the mature protein in comparison	
CC	with the clone TIMP3clone 7 product (R84215). TIMP3HCM-3 was	
CC	isolated from a human colonic mucosa cDNA library using primers	

CC based on TIMP sequences. The cDNA is pref. expressed in Escherichia
CC coli for use in recombinant TIMP-3 prodn. Genes coding for TIMP may
CC also be useful for gene therapy e.g. of emphysema.
SQ Sequence 820 BP; 204 A; 225 C; 188 G; 203 T;

Query Match	5.7%;	Score 60;	DB 16;	Length 820;
Best Local Similarity	60.9%;	Pred. No. 4.93e-20;		
Matches 167; Conservative	0;	Mismatches 107;	Indels 0;	Gaps 0;

[illegible]

RESULT	15
ID	T02360 standard; DNA; 963 BP.

DE	29-FEB-1996	(first entry)
DT	TIMP-3 DNA clone Timp3c1one2.	
KM	TIMP-3; tissue inhibitor metalloproteinase type three; cancer;	
KW	Inflammation; emphysema; embryo implant modulation; arthritis;	
KX	dystrophic epidermolysis bullosa, periorbital disease; ulcer;	
OS	scleroderma; vulnery; gene therapy; ss.	
HM	Homo sapiens.	
FH	Key	
FT	CDS	Location/Qualifiers
FT	/tag= a	
PN	M095089j8-A1.	
PD	13-APR-1995.	
PE	04-OCT-1994; U11241.	
PF	06-OCT-1993; US-134231.	
PA	(AMGE-) AMGEN INC.	
PI	Koski RA, Silbiger SM;	
DR	WPI; 95-155259/20.	
PT	P-PDB; R84215.	
PR	New tissue inhibitor metallo:proteinase type three - for treating	
PT	cancer, inflammation, emphysema, embryo implant modulation, nerve	
CC	cell disorders, etc.	
PS	Example 4: Page 67-68; 113pp; English.	
CC	CDNA clone Timp3clone2 (T02350) codes for a natural variant	
CC	(R84216) of tissue inhibitor metalloproteinase 3 (TIMP-3), lacking	
CC	part of the signal peptide of the Timp3clone 7 product (R84215).	
CC	The CDNA clone was isolated from a human 20 and 24 wk foetal kidn	
CC	CDNA library using primers based on TIMP sequences. The cDNA is	
CC	pref. expressed in Escherichia coli for use in recombinant TIMP-3	
CC	prodn. Genes coding for TIMP may also be useful for gene therapy	
CC	e.g. of emphysema.	
SQ	Sequence 963 BP; 227 A; 276 C; 231 G; 229 T;	

Query Match	5.7%;	Score 60;	DB 16;	Length 963;
Best Local Similarity	60.9%;	Pred. No. 4.93e-20;		
Matches 167;	Conservative 0;	Mismatches 107;	Indels 0;	Gaps 0;

D6 291 atgcaagaatgtacacgcggctgttgcacctcgtyggagagtggaccaagctcacccctc 350
||||||| ||| | ||||| ||||| ||| |
QY 644 atgcaatatgatatacacccctctggaactcatcgtgccctggacaaccctgatggcca 703

Db 351 ccgcgcgaagaaggcctgaacatctcgtatcaccccggtttgtactcgaagataaattct 410
 Oy |||||
 Db 704 cccgaagaagaagcctttaaaccacaggtaccagaaggcctgtgagtgcaagataactcga 763
 Oy |||||
 Db 411 gctactacctgccttgctttgtgacttcagaagaagagtgtcctctggaaccgacatgctc 470
 Oy |||||
 Db 764 gcccatgatcccatcgtctaatctctctctccgcgcgaggtgcctctgatgtgactggtaa 823
 Oy |||||
 Db 471 ccaatttcggttacccctggtctaccagttccaaacctcagcctcgtatctcggcagaagggcg 530
 Oy |||||
 Db 824 cggagaagaacatcaataacgcgagacacacaggcccaagttcttcgcctcgtatcaagaagaagcgacg 883
 Oy |||||
 Db 531 gctactgcagctgtgtaccaggaagtgggccccc 564
 Oy |||||
 Db 884 gctcctgcgctgtgtaccgcggagacgaacacccc 917
 Oy |||||

Search completed: Mon May 4 13:25:12 1998
Job time : 375 secs.

was prepared from mRNA obtained from Clontech Laboratories, Inc., and primed with a Not I - oligo(4T) primer [5].
 TGTACCAATCTGAAGTGGAGGCGGCCCAATTTTCTTTTCTTTT 3').
 Double stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT73 vector. Library went through one round of normalization to Cot5, and was constructed by Bento Soares and M. Fatima Bonaldo.

/db_xref="Gene:5930425"
 /db_xref="taxon:9606"
 /clone_lib="Soares testis NHT"
 /clone_lib="743271"
 /sex="male"
 /lab_host="DH10B"

BASE COUNT 98 a 150 c 164 g 144 t
 ORIGIN

Query Match 38.3%; Score 400; DB 28; Length 556;
 Local Similarity 89.8%; Pred. No. 0.00e+00;
 Matches 485; Conservative 0; Mismatches 49; Indels 6; Gaps 2;

DB 18 TTTATTCATGCTGTTTCCAGGAGGATGTCAAGCTGACCGACCGTGAACCTTGAGG 77
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 CP 1045 ttattcatcgtctgtccaggaaggatgctgagaccagctgacactctggaca 986
 DB 78 CTTTTCATGCTGACGAGGCGGCTGAGGCGCTGATGGTCTGCTGATGCGAG 137
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 CP 985 cgtg-----caatggcccaaggagctcgtgctgcttccgagctcgtcgtcag 931
 DB 138 AAATCTGCTGTTGGGGGGGCGCCGCG-CCGCTACACAGCAGAGCCCTCACTTCTT 196
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 CP 930 aaactcgtctggggggggtgctgctcgcggtacagagcgagcgctgcttctct 871
 DB 197 GATGAGGCGAGAACTGTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 256
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 CP 870 gatgaaggagaaactgtgctgctgctgctgctgctgctgctgctgctgctgct 811
 DB 257 CCAGAGGAGCTGCTCGGGGAGAGATGTAGACAGGAGATCATGGGCGAGCGCTGATCT 316
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 CP 810 ccagagggcactcgtccggagagagatgacatgagacatgagggcagctgactct 751
 DB 317 GCAGTGCAGCCCATCTGTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 376
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 CP 750 gacatcaagccatcgtgctgctgctgctgctgctgctgctgctgctgctgct 691
 DB 377 GTTCCAGGCGACGATGACGATGACGATGACGATGACGATGACGATGACGATGAC 436
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 CP 690 gtcccaaggacagatgacatgacatgacatgacatgacatgacatgacatgacat 631
 DB 437 TCTGCAATGATATTCCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCT 496
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 CP 630 ccttcgaatgagatcctcctcctcctcctcctcctcctcctcctcctcctcctcct 571
 DB 497 GGAGGGGCGCGGTGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 556
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 CP 570 ggcggggggtggtgataaactcctcctcctcctcctcctcctcctcctcctcctcct 511
 RESULT 2
 LOCUS W49684 518 bp mRNA EST 11-OCT-1996
 DEFINITION zc43c09 r1 Soares senescent fibroblasts NDHSF Homo sapiens CDNA
 clone 325072 5' similar to gb:S48568 TISSUE INHIBITOR OF
 METALLOPROTEINASES II PRECURSOR (HUMAN).
 ACCESSION W49684
 NID 91337958
 KEYWORDS EST.
 SOURCE human.
 ORGANISM Homo sapiens
 Eukaryota; Eukaryota; Eukaryota; Eukaryota; Eukaryota; Eukaryota;
 Vertebrata; Eutheria; Primates; Catarrhini; Hominoidea; Homo.
 REFERENCE 1 (bases 1 to 518)

AUTHORS Hillier, L., Clark, N., Dubuque, J., Elliston, K., Hawkins, M.,
 Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M.,
 Parsons, J., Rifkin, L., Rohlfing, T., Soares, M., Tan, E.,
 Trevisan, E., Waterston, R., Williamson, A., Wohlmann, P. and
 Wilson, R.
 TITLE The WashU-Merck EST Project
 JOURNAL Unpublished (1995)
 COMMENT

Contact: Wilson RK
 WashU-Merck EST Project
 Washington University School of Medicine
 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
 Tel: 314 286 1800
 Fax: 314 286 1810
 Email: est@wustl.wustl.edu
 This clone is available royalty-free through LML; contact the
 IMAGE Consortium (info@image.llnl.gov) for further information.
 Insert Length: 615 Std Error: 0.00
 Seq primer: mob.BEAG+ET
 High quality sequence stop: 381.
 Location/Qualifiers

FEATURES
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 polylinker V type; phagemid; Site 1: Not I; Site 2: Eco
 RI; TGTACCAATCTGAAGTGGAGGCGGCCCAATTTTCTTTTCTTTT
 3'); double-stranded cDNA was size selected, ligated to
 Eco RI adaptors (Pharmacia), digested with Not I and
 cloned into the Not I and Eco RI sites of a modified pT73
 vector (Pharmacia). Library went through one round of
 normalization to a Cot = 5. Library constructed by Bento
 Soares and M. Fatima Bonaldo."
 /db_xref="taxon:9606"
 /clone_lib="325072"
 /clone_lib="Soares senescent fibroblasts NDHSF"
 /tissue="senescent fibroblast"
 /lab_host="DH10B (ampicillin resistant)."

BASE COUNT 126 a 152 c 143 g 94 t 3 others
 ORIGIN
 Query Match 34.8%; Score 364; DB 16; Length 518;
 Best Local Similarity 89.6%; Pred. No. 0.00e+00;
 Matches 414; Conservative 0; Mismatches 47; Indels 1; Gaps 1;

DB 1 AGATGTCAGAGGCGCTGAGAGATATGATGATGATGATGATGATGATGATGATGATGAT 60
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 CP 518 agatgtcaaggacatgacatgacatgacatgacatgacatgacatgacatgacat 577
 DB 61 TGTGCGGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 120
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 CP 578 tgtggtgggtcgtcgtgacatgagaaagagatcattcattcattcattcattcattc 637
 DB 121 AGGGGAGCGGAGATGACATGACATGACATGACATGACATGACATGACATGACATGAC 180
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 CP 638 aggggaatggaatgacatgacatgacatgacatgacatgacatgacatgacatgac 697
 DB 181 GCACCAACCCAG 240
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 CP 698 gtgcacccagagaagaagagctcgtgacacagatgacatgagtgatgagtgacatgac 757
 DB 241 CGCGTGCCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 300
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 CP 758 ctgcatgcccattcattcattcattcattcattcattcattcattcattcattcattc 817
 DB 301 GGGTCACAG 360
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 CP 818 ggttcagaggaagaacatcaagagaccca-ggccaagctcctcgtcgtcgtcgtcgtcgt 876
 DB 361 AGTACGCTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 420
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 CP 877 agcgaggtcctcgtcgtcgtcgtcgtcgtcgtcgtcgtcgtcgtcgtcgtcgtcgtcgt 936

Db	421	ATCGAGGACCCATAAGCAGGGCTTCAAGGCCCTGTGCACA	462
Oy	937	atcgagaccgctaagcagccacgaactctgggcacca	978
RESULT LOCUS	3 AA400168	583 bp mRNA EST	09-NOV-1997
DEFINITION	z69f08.r1 Soares testis NHT Homo sapiens cDNA clone 743271 5' similar to gb:S48568 TISSUE INHIBITOR OF METALLOPROTEINASES II PRECURSOR (HUMAN);.		
ACCESSION	AA400168		
MID	g2054120		
KEYWORDS	EST.		
SOURCE	human.		
ORGANISM	Homo sapiens Eukaryote; Metazoa; Chordata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.		
REFERENCE	1 (bases 1 to 583)		
AUTHORS	Hallier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S., Kitzman,D., Kucaba,T., Lacey,M., Le,N., Lennon,G., Marra,M., Martin,J., Moore,B., Schellenberg,K., Stepcoe,M., Tan,F., Theising,B., White,Y., Wylie,T., Waterston,R. and Wilson,R. WashU-NCI human EST project unpublished (1997).		
TITLE	Contact: Wilson RK Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108 Tel: 314 286 1800 Fax: 314 286 1810 Email: estewatson.wustl.edu This clone is available royalty-free through LML ; contact the IMAGE Consortium (infoimage.lml.gov) for further information. Insert length: 869 Std Error: 0.00 Seq primer: -28ml3 rev2 ER from Amersham High quality sequence stop: 493.		
JOURNAL	Location/Qualifiers		
COMMENT	1..583 /organism="Homo sapiens"/note="Vector: pUT3D-Pac (Pharmacia) with a modified polylinker. Site_1: Not I; Site_2: Eco RI; 1st strand cDNA was prepared from mRNA obtained from Clontech Laboratories, Inc., and primed with a Not I - oligo(dT) primer [5'] TGTTACCATCTGAAGTGAGGAGCGGCCGCCAATTTTTTTTTT 3'). Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pUT3 vector. Library went through one round of normalization to Cot5, and was constructed by Bento Soares and M. Fatima Bonaldo."/db_xref="GDB:5930425"/db_xref="taxon:9606"/clone="743271"/clone_lib="Soares testis NHT"/sex="male"/lab host="DH10B"		
FEATURES	BASE COUNT 147 a 151 c 163 g 122 t		
SOURCE	ORIGIN		
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	Db 159 TGATGAGGGCCCAACACGGTCAGTGAAGAAGAGTGGACTCTGGAAACGACATTATGCA 218 Oy 419 tgataaggccaacacgtcaataagaagagtgtagcttgcacagcatcttcagca 478 		
	Db 219 ACCCTATCAAGAGAGTCCGATGATGATGAATCAACAGATTAAGATGTTCAAGGGCGCTGAGA 278 Oy 479 accccatcaaggagattcagtatgatcatcaagcagataaagatgtltcaaggacctgtac 538 		
	Db 279 AGGATATAGAGTTTATCTTACACGCCCCCTCTCGGACAGTGTGTGGGGTGTCTGCTGGACG 338		

REFERENCE	AUTHORS	TITLE	JOURNAL	COMMENT
539	aggaratnaga	tttatacttcaacacagcccccgcgcgtctgtgtgtgtcttcgtcgtgaca	598	
339	TTGGAGGAAGAAGAAATATCTCATTTGACAGAAAGCCGAGGAGGAGCAAGATGCACA	398		
599	tttgaggaagaagaagatcatctcatcttgacgaagagccgagggagatgcaatctgcata	658		
399	TCACCTCTGTGACTTCAATCGTGGCCCTGGAGACACCTTGACACACCAAGAAAGAGACC	458		
659	tcacctctgtgactcatctgtgcccttggagacacctgtgtgccaccacagaagaagacc	718		
459	TGAACCAAGGATACAGATGGCGCTCGAGTGCATACAGCGGCGCCCATGATCCGCT	518		
719	tgaaccacaaggaacacagatcggtctgtgtgaagatactatgacgcccatgacctccat	778		
519	GCTACATCTCTCCCTCCGAGACGAGTGCCTCTGGATGGAGTGGCTGCACAGAAACATCA	578		
779	gtcatctctcctctccgcagcaggtgtcctctgtatgactggtgtcaacgagaagaatca	838		
Db	579 ACGG 582			
Qy	839 acgg 842			
RESULT	4			
LOCUS	AA183361	531 bp	mRNA	EST 15-FEB-1997
DEFINITION	mo96g07.r1 Stratagene mouse testis (#937308) Mus musculus cDNA clone 567612 5' similar to gb:S48568 TISSUE INHIBITOR OF METALLOPROTEINASES II PRECURSOR (HUMAN): gb:X67622 M.musculus T1P-2 mRNA for tissue inhibitor of metalloproteinases, (MOUSE): AA183361			
ACCESSION	AA183361			
NID	91767539			
KEYWORDS	EST.			
SOURCE	house mouse.			
ORGANISM	Mus musculus			
	Eukaryotes; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.			
	1 (bases 1 to 531)			
	Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T., Getzel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M., Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B., Thieling,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and Waterston,R.			
	The WashU-HM1 Mouse EST Project			
	Unpublished (1996)			
	Contact: Marra M/Mouse EST Project			
	WashU-HM1 Mouse EST Project			
	Washington University School of Medicine			
	4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108			
	Tel: 314 286 1800			
	Fax: 314 286 1810			
	Email: mouseest@wustl.wustl.edu			
	This clone is available royalty-free through LNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.			
	MG1:342260			
	Seq primer: -28m13 rev1 ET from Amersham			
	High quality sequence stop: 96.			
	Location/Qualifiers			
	1. 531			
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	/db_xref="taxon:10090"			
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	/sex="males"			

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O y	539	agacatacgaattatctactacaagcccccgctgcgtgctgggggttcctgcctggaca	558
D b	438	TTGGAGAAAGAAGAGATATCTAATTGCAGGAAGGACAGAGAGATGGCAATGACA	497
O y	599	tltggaggaaagaagagtattcatcttgcagggaagccggggggaatygaatatgata	658
D b	498	TTCACCTCTGTGACTTCAATTGTGCCCTGGGACACGCTTAGCATCACCAAGAAGAGCC	557
O y	659	tcaccctctgtgacttcatcgtgcctcctggagaccacctgagtcgccaccagaagaagccc	718
D b	558	TGAACCAAGGTATACCAGATGGGGCGTGATAGTCA-GATCACTCGCTGCCATATCCCTT	616
O y	719	tgaaccaaaagtlaccagaatcgtgcgtgtagtgcaaatcacctcgatgcccaatgatcccat	778
D b	617	GCTACATCTCTCCCCCGGATGAATGACCTCTGGATGGATGGGTACACANGA-GAGCATCC	675
O y	779	gtcatactctctcccgagcagagtgctctctgtagtgccttgggtlcaocgnaaagaactca	838
D b	676	ATTGGCACAGGCACACAGTTCTTTGGCCGTG-ATCAAAGA-GTGATNGTTCTTGGCGCGTGT	733
O y	839	acggagacaccaaagcttaattcttcgcctgcatacaagaagaagcagcgtctctcgcgcctgt	898
D b	734	ACGGGGGGGAGACCCCAAGAG-756	
O y	899	acgcggagcagcagacccccacaag-921	

DEFINITION
V9191a09.51 Soares mouse mammary gland NbMmG Mus musculus cDNA clone 8511328.7, similar to gb:562622 M.musculus TIMP-2 mRNA for tissue inhibitor of metalloproteinases, (MOUSE).

ACCESSION	AA402/34
NID	92187625
KEYWORDS	.EST.
SOURCE	house mouse.
ORGANISM	Mus musculus

REFERENCE
AUTHORS
1 (bases 1 to 429)
Marra, M., Hillier, L., Allen, M., Bowles, M., Dietrich, N., Dubuque, T.,

TITLE	COMMENT
The WashU-HHMI Mouse EST Project Unpublished (1996)	

Contact: Marra M/Mouse EST Project
 Mashu-HHMI Mouse EST Project
 Washington University School of Medicine
 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
 Tel.: 314 286 1800
 Fax: 314 286 1810
 Email: mouseest@watson.wustl.edu
 This clone is available royalty-free through INL; con-
 IMAGE Consortium (info@image.inl.gov) for further info
 MGI:503280
 Seq primer: -28m3 rev2 ET from Amersham
 High quality sequence stop: 369.
 Location/Qualifiers
 1..429

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/organism="Mus musculus"
/strain="C57BL/6J"
/note="Vector: pT73D-Pac (Pharmacia) with a modified
polylinker; Site_1: Not I; Site_2: Eco RI; 1st strand cDNA
was primed with a Not I - oligo(dT) primer [5',
TGTTACCAATCTGAAGTGGAGCGCGCCGACGATGTTTTTTTTTTTTTTT

```

T3.1: double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT73 vector. RNA provided by Dr. Minoru Ko, Wayne State Univ. Library constructed and normalized by Bento Soares and M. Fatima Bonaldo."

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/clone="851128"  
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/sex="male"  
/dev_stage="4 weeks"  
/lab_host="DH10B"  
<1. >429
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Best Local Similarity	88.8%;	Pred. No. 0.00e+00;		
Matches 380;	Conservative 0;	Mismatches 46;	Indels 2;	Gaps 2;

Db 3 GGGATGATCATCTTATGGCAOCCCATAAAGGATTTAGATGTGATGATCAAGCAAGTAAAG 62
 QY 460 ggcacgacacatctacgcgaaccccatcaaggcgatttcagatagatgatacaagcagataaag 519
 Db 63 ATGTTCAAAGCACTGTGCAAAAGACATCGATGATTTTAA-ACAGGCGCCCT-CTTAGACAGTG 120
 QY 520 atgttcaaggagactgtatcagataagatttatactacaacagcccccgcgcgtccgctg 579

Db	121	TGCGGGGCTCTGCTGGAGCGTTGGAGGAAGAAGACATCTTAATTGCAGGAAGAAGCGAA	180
OY	580	Tgttggtctcgtcgtgacatttgtaggaagaagagatctcaattctgaaagagcgag	639
Db	181	GGAAATGGCAAGATGCACATTAACCTCTGTGACTTCATTTGTGCCCTTGAGACAGCTTAGC	240
OY	640	gggaatggcaataatgacataaccctcttggactctctggcccttggagacccttgat	699
Db	241	ATCAACCGAAGAAGAGAGCCTGTAACACAGAGTACAGATGGGCTGTGATGATCAAGATCACH	300
OY	700	gccaccagaagaagagagccttgaaccacagatgaccagatggcttggatgcaagatcact	759
Db	301	CGAGTGTCCATGATCCCTGTGTATATCTCCGCCCGGATGATGAGGCCCTGTGAGGACTG	360
OY	760	cgaatgcccaatgataccatgctaatatctcctctcggagcagatggcccttggatggactgg	819
Db	361	GTCACAGAGAAGAGACATCAATGGGACACAGGCCAAGTTCTTTCGGCTGECATCAAGANAAGT	420
OY	820	gtccacagagaagaacataccaacagacacacagcccaagttcttcgcctcatcaagagaagc	879
Db	421	GATGGTTC	428
OY	880	gacggctc	887

RESULT	9				
LOCUS	T48826	434 bp	mRNA	EST	08-FEB-1995
DEFINITION	yb05d08.r1 Homo sapiens cDNA clone 70287 5' similar to gb:S48566 (TISUE INHIBITOR OF METALLOPROTEINASES II PRECURSOR (HUMAN)).				

ACCESSION	7148826
NID	9650686
KEYWORDS	EST.
SOURCE	human clone=70287 library=Stratagene placenta (#937225)

vector-pBluescript *sr*-host-SOIR cells (kanamycin resistant) primer-M13[R] Rstrel-EcoRI Rstrel-XhoI placental tissue from a Caucasian male. Cloned unidirectionally. Primer: Oligo dT. Average insert size: 1.2 kb; Uni-ZAP XR Vector; 5' adaptor sequence: 5'-GAATTCGGCAGCAG-3', 3' adaptor sequence: 5'-CTCGAGTTTTTTTTTTTTT-3'.

ORGANISM	REFERENCE	AUTHORS
<i>Homo sapiens</i>		
Eucaryotes: Metazoa: Chordata: Vertebrata: Gnathostomata: Mammalia		
Eutheria: Primates: Catarrhini: Hominoide: Homo.		
1 (cases 1 to 436)		
Hillier, L., Clark, N., Dubuque, T., Eilston, K., Hawkins, M.,		

[illegible][illegible]

Db 392 GTGTCCCAAGGACGATGAAGTTCACAGAGGTGATGTGCATCTTGCCGTCCCCTCGGCC 451

Cp	692	gtgccacggcgcagcatgaatcaacaagggtgatcatgcatcttcctcccgacc	633
Db	452	TTTCCTGCATGAGATATCTCTTCTCCCAACGT	488
Cp	632	tcccctgcatacagataactccttcttccccaattg	596
RESULT	11		
LOCUS	W49722	489 bp	mRNA EST 11-OCT-1996
DEFINITION	zc543g09.s1 Soares senescent fibroblasts NbHSF Homo sapiens CDNA clone 32120 3' similar to gb:S4568 TISSUE INHIBITOR OF METALLOPROTEINASES II PRECURSOR (HUMAN)..		
ACCESSION	W49722		
NID	g1337987		
KEYWORDS	EST.		
SOURCE	human.		
ORGANISM	Homo sapiens		
	Eukaryote; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Primates; Catarrhini; Hominiidae; Homo.		
REFERENCE	1 (bases 1 to 489) Haller, L., Clark, N., Dubuque, J., Elliston, K., Hawkins, M., Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Marra, M., Parsons, J., Rifkin, B., Rohlfing, T., Soares, M., Tan, F., Trevisakis, E., Waterston, R., Williamson, A., Wohlmann, P. and Wilson, R. The WashU-Merck EST Project Unpublished (1995)		
TITLE	Contact: Wilson RK		
JOURNAL	WashU-Merck EST Project		
COMMENT	Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108 Tel: 314 286 1800 Fax: 314 286 1810 Email: est@watson.wustl.edu This clone is available royalty-free through LNL ; contact the IMAGE Consortium (info@image.lnl.gov) for further information. Insert Length: 627 Std Error: 0.00 Seq primer: mob.REGA+Er High quality sequence stop: 356. Location/Qualifiers 1..489 /organism="Homo sapiens" /note="Vector: pUT73D (Pharmacia) with a modified polylinker V-type phagemid; Site_1: Not I; Site_2: Eco RI; TGTTACCATTGCGAGGGAGGGCGGCGCATTTTTTTTTTTTTTTT 3'; double-stranded cDNA was size selected, ligated to Eco RI adapters (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of a modified pUT73 vector (Pharmacia). Library went through one round of normalization to a Cot = 5 library constructed by Bento Soares and M.Fátima Bonaldo." /db_xref="taxon:9606" /clone_id="Soares senescent fibroblasts NbHSF" /lisuse_type="senescent fibroblast" /lab_host="DH10B (ampicillin resistant)" complement(<1..>489)		
FEATURES			
SOURCE			
ORIGIN	mRNA BASE COUNT 82 a 126 c 148 g 131 t 2 others		
Query Match	30.1%; Score 315; DB 16; Length 489; Best Local Similarity 88.2%; Pred. No. 0.00e+00;		
Matches	403; Conservative 0; Mismatches 47; Indels 7; Gaps 3;		
Db	32	TTTATTCATGCTGTTTCCAGAGAAGGATGTCAGACTGCACCAAGTCGAACCCCTTGAGAG	91
Cp	1045	tttatcatgctgctgcacagsaagtatgctgagactgaccaccttgtagaca	986
Db	92	CTTTTTCGAGTGCGCACACAGGGGCGTTGGAGGGCCTGTTATGGGTCTCGATGCGAG	151
Cp	965	cctgt-----aatggccccagaatcctgtgtgagcctgtcttaaggtccctcgatgcccag	931

Db	152	AAATCGTCGTTTGGGGGGGGCCGCCGCTGNACAGCAGCAGACCGCATCTTCTT	211
Cp	930	aactccctgcgttggggggtgctcctcccggtacacagcgagagccgctgccttct	871
Db	212	GATCAGAGCGAAGAAGACTTGCGCTGTGTGCCCGGTGATATTCTTCTGTGAACCAGTCAT	271
Cp	870	gatcgagcgagaaacttgctcgtgttcgattgattctctccgtaccacagfcat	811
Db	272	CCAAGGCATCTGTCGGGGAGAGATGTGACAGGGATCATGGGCAAGCGCTGATCT	331
Cp	810	cgaaggagcactcgtccgagagatgatltagcatatgatgagcatalcagtacct	751
Db	332	GCACTCGAGACCCATCTGATACGTCGTCAGAGCTTCTTCTGCGGTGTCTCACGG	391
Cp	750	gcactcacagcccctcgttacctgtygttcaaggctctctctcttggg-lygcactaagg	692
Db	392	TGTCCAGAGGACAGATGATGACAGAGGTGATGTGATCTTGCCGTCGCCCTCGAGGC	451
Cp	691	tgtccagaggcagatgaagtaacagaagggtgatatgcataattgccattccctcg-ec	633
Db	452	TTTCTCGATGAGATTAATCTTCTTCTTCTTCCACAGCT	488
Cp	632	ttcctcgaatgagatactctctcttccccaagt	596
RESULT	12		
LOCUS	W49721	532 bp mRNA EST	11-OCT-1996
DEFINITION	zc43g09.i1 Soares sesescent fibroblasts NBHSE Homo sapiens CDNA clone 3212120 5' similar to gb:A48568 TISSUE INHIBITOR OF METALLOPROTEINASES II PRECURSOR (HUMAN)..		
ACCESSION	W49721		
NID	G1337986		
KEYWORDS	EST.		
SOURCE	human.		
ORGANISM	Homo sapiens Eukaryote; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Primates; Catarrhini; Homnidae; Homo.		
REFERENCE	1 (bases 1 to 532)		
AUTHORS	Hillier,L., Clark,N., Dubuque,T., Elliston,R., Hawkins,M., Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M., Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F., Trevasaki,E., Waterston,R., Williamsom,A., Woldmann,P. and Wilson,R.		
TITLE	The WashU-Merck EST Project		
JOURNAL	Unpublished (1995)		
COMMENT	<p>Contact: Wilson RK WashU-Merck EST Project Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108 Tel: 314 286 1800 Fax: 314 286 1810 Email: est@wustl.wustl.edu This clone is available royalty-free through LNL; contact the IMAGE Consortium (info@image.lnl.gov) for further information. Insert Length: 627 Std Error: 0.00 Seq primer: mod.RGA+ET High quality sequence stop: 347. location/Qualifiers 1..532 /organism="Homo sapiens" /note=Vector: pTF3D (Pharmacia) with a modified polylinker V-TYPE: phagemid; Site_1: Not I; Site_2: Eco RI; TGTTACATCATGAGTAGTGAGCGGGCCGATTTTTTTTTTTTTTTT 31), double-stranded cDNA was size selected, ligated to Eco RI adapters (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of a modified pTY7 vector (Pharmacia). Library went through one round of normalization to a Cot =5. Library constructed by Bento Soares and M.Faciina Bonaldo. /db_xref=taxon:9606"</p>		
FEATURES			
source			

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 /note="metalloproteinase inhibitor signal peptide"
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 /note="metalloproteinase inhibitor"
 POLYA_signal 1011.1016
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 Matches 1033; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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 1 attcggcgccgcgtcccccaccccgccgcgcgcggaattggccgcgcgcct 60
 63 CCCTGGCGCCCGCGAGACAAAGAGAGAAAGTTGGCGCGCGCGGCGGAGTGA 122
 61 cccctggcgcccgagacaaagagagaaagtgttcgcygcgcgagcgggcaagtga 120
 123 GGAAGGTGACCCCGCGGAGAGGAGGCGCGCTCGGCGCGCGCTCAGCCCGCGCGCC 182
 121 ggaaggtgaccccgcgagagagagagagagagagagagagagagagagagagag 180
 183 CCAAGCCCGCGCGGAG 242
 181 ccaagcccgcgcgag 240
 243 CCG 302
 241 cccg 300
 303 CTGGGCGAGCTGCTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGAG 362
 301 ctgggcgagctgctgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgag 360
 363 GCGTTTTCAGTACAGATGATGATGATGATGATGATGATGATGATGATGATGATG 422
 361 gcgttttcagatgagatgagatgagatgagatgagatgagatgagatgagatgag 420
 423 TCGGAAAGACATTTATGCAACCCATATTAAGAGATGATGATGATGATGATGATG 482
 421 tcggaaagacatTTATGCAACCCATATTAAGAGATGATGATGATGATGATGATGAT 480
 483 AAGATTTCAAAGGCGCTGAGAGATATATATATATATATATATATATATATATAT 542
 481 aagatTTCAAAGGCGCTGAGAGATATATATATATATATATATATATATATATATAT 540
 543 GTGTGGGCTCTCGCTGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 602
 541 gtgtgggctctcgtgag 600
 603 GAGGGGAGGCGAGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 662
 601 gaggggagggcgagatgagatgagatgagatgagatgagatgagatgagatgagat 660
 663 AGCAGACCCAGATC 722
 661 agcagacccagatc 720
 723 ACAGGCTGCGCCATGATGATGATGATGATGATGATGATGATGATGATGATGATG 782
 721 acaggctgCGCCATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 780
 783 TGGGTACAG 842
 781 tgggtacag 840
 843 AGGAGGCGCTCTGCTGATGATGATGATGATGATGATGATGATGATGATGATGATG 902
 841 aggagGCGCTCTGCTGATGATGATGATGATGATGATGATGATGATGATGATGATG 900

DB 903 ATGAGAGACCATACAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 962
 901 atgagagaccatACAG 960
 DB 963 AGGTTTTCAGTACAGTCTGATGATGATGATGATGATGATGATGATGATGATG 1022
 961 aggttttcagtacagctctgacatcccttcctcgtgaacagcatgataaacatc 1020
 DB 1023 ATCCCGGAATTC 1035
 1021 atcccggaattc 1033

RESULT 2 HUMTIMP2 1062 bp mRNA PRI 14-JAN-1995
 LOCUS
 DEFINITION Human metalloproteinase-2 inhibitor (TIMP-2) mRNA, complete cds.
 ACCESSION J05593
 NID 9339706
 KEYWORDS metalloproteinase-2 inhibitor.
 SOURCE Human melanoma cell line A2058, cDNA to mRNA, clone PT2-M01.
 ORGANISM Homo sapiens
 Eukaryote; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Primates; Catarrhini; Hominoidea; Homo.

REFERENCE 1 (bases 1 to 1062)
 Stetler-Stevenson M.G., Brown, P.D., Onisto, M., Levy, A.T. and Iliotta, L.A.
 Tissue inhibitor of metalloproteinases-2 (TIMP-2) mRNA expression in tumor cell lines and human tumor tissues
 J. Biol. Chem. 265 (23), 13933-13938 (1990)
 COMMENT Draft entry and computer-readable [or printed] sequence for [J. Biol. Chem. (1990) In press]
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 /organism="Homo sapiens"
 /db_xref="taxon:9606"
 /map="Xp11.3-pl1.23"
 271..348
 /gene="TIMP"
 /note="metalloproteinase-2 inhibitor signal peptide"

CDS
 sig_peptide
 271..933
 /gene="TIMP"
 /note="metalloproteinase-2 inhibitor precursor"

gene
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 349..930
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 mat_peptide
 /note="metalloproteinase-2 inhibitor"

BASE COUNT 222 a 370 c 316 g 154 t
 ORIGIN

Query Match 95.7%; Score 989; DB 27; Length 1062;
 Best Local Similarity 99.5%; Pred. No. 0.00e+00;
 Matches 1014; Conservative 0; Mismatches 1; Indels 4; Gaps 4;
 DB 29 GCCCGCGCGCCCAACCCCGCGCGCGCGCGCGAGATGCGCCCGCGCGCC-TCCTC 87
 7 gcccgcgcgcccaaccccgcgcgcgcgcgcgagattgccccgccccctccctc 66
 DB 88 GCCCGCGCGAG 146
 67 gcccgcgcgag 126

[illegible][illegible]

QY	607	gacggcaagatgacatcatcacctctgtgacttcatctgtccctcggggaacacctgagaaacc	666
Db	665	ACCCGAAGAAGAGAGCCTTAACCAACAGGTACCAAGATGGGCTTCGAGTGCAGATCAACGCGC	744
OY	667	accggaagaagagagccttaaccacaaggtaccagatggtcgtcgagtgcagatcaacgccc	726
Db	745	TGCCCATGATCCCGCTGTACATCCCTCCCGGACAGAGTGGCTCTGCTCATCAAGAGAGTAC	804
OY	727	tgcccacgatacccggtctacatctccctcccccgaagatgctcctgtgactgagctggtc	786
Db	805	ACAGAGAAGAACATCAACAGGGGACAGGCGCAAGTCTTTCGCTCTCATCAAGAGAGTAC	864
OY	787	acagagaagaacatcaatcaagggcaccagacgaagtcttcgtcgtcacaagaagaagagac	846
OY	847	ggtctctgtcgtgtgtaacgagcgagcgagcgcgcccaagcagaggtttctgacatcag	906
Db	925	GACCCATTAAGAGAGGCTTCCACAGGCGCCGCTGTGGCCCACTGCAGAAAAGCCCTCCAAAGGTT	984
OY	907	gaccataagaagagcctccaagcgcctgtgccaactgcaaaaaagcctccaagagtt	966
Db	985	TGCAATGGTCCAGCTCTGACATCCCTTCTCTGGAAGACGATGATTAATAACATCATCCTCC	1043
OY	967	tcgactgttccagctctgacatccctctctcgtgaaacagcatgataataacatcatctcc	1025
RESULT	4		
LOCUS	RNU14526	969 bp	mRNA
DEFINITION			Rat R14526
ACCESSION			U14526
NID			9540204
KEYWORDS			
SOURCE			
ORGANISM			
REFERENCE			
AUTHORS			
TITLE			
JOURNAL			
EDLINE			
REFERENCE			
JTHORS			
JTITLE			
JOURNAL			
FEATURES			
SOURCE			

mat.peptide	DP*	/product="tissue inhibitor of metalloproteinases-2"
3'UTR	287. .868	872. .969
POLYA_site	961. .966	
BASE COUNT	211 a 298 c 289 g 171 t	
ORIGIN		
Query Match	59.1%;	Score 611; DB 14; Length 969;
Best Local Similarity	90.9%;	Pred. No. 0.00e+00;
Matches	701; Conservative	0; Mismatches 66; Indels 4; Gaps 1
Db	202	GCCCGCATGGGCGCGCGCGCCGACGCTCCGGCTGCGCTCGCTGCTGCGC 261
Qy	246	gcccgcataaggcgccggcgccgcacacctgcygctcgctcgctcctctgctcgc 305
Db	262	CACGCTGCTGGCGCGCGCGCGCGCTGAGTGTCTCCCGGTGACCCGCAACGGCGTT 321
Qy	306	gacgctgcttcgcccgc 365
Db	322	TTGCAATCAGACGATGATGATCAGGCGCAAGGAGTGTGAGCAGAGAGAGGATTCGCG 381
Qy	366	ttgcaatgcaatgtaatgtaatgtaatgtaatgtaatgtaatgtaatgtaatgtaat 425
Db	382	GATGACATCTATGGCAACCCCATCAAGAGGATTCATATGATGATCAGCAGATTAAGAT 441
Qy	426	aaacgacattatggaacacctatcaagaagatcagatgataagcaagaataaagat 485
Db	442	GTTCAAGAGACCTGACCAAGGACATCGAATTTATACAGGCGCCCTTCCTCAGCAGTGTG 501
Qy	486	gtlcaaaaggcctgagaagataatagattatcacaagccccctctcgcaagtgtg 545
Db	502	CGGGGTCTCGCTGACGCTGTGGAGAAAGAGATATCTATTTCAGAGGAAGCGGGAAG 561
Qy	546	tggggctcgtctgtaacgttggagaagaagaatactcaatgcaagaagaagcgaggg 605
Db	552	AGATGCAAGATGACATATTACCTCTGTGACTTTATTTGTGCCCTGGACACGCTTAGCAT 621
Qy	606	ggaagcgaagatgacatcacctctgtactcatctgtccctgggaacacctgagcac 665
Db	622	CACCCAGAAAGAGCCTTAACCCACAGGTACAGATGGGCTGCCAGTGCAGATCACAGC 681
Qy	666	caccagaagaagaagccttgaaccccaagttaccagatgagctgagtgcaagatcacgcg 725
Db	682	CTGGCCCTATGATCCCATGCTATCATCTCTCCCGGAGAGTGGCTCGATGGATCGGCT 741
Qy	726	ctggcccatgctcccgctgtaacatctctctcccggaagatgctcctcgatgagctgggt 785
Db	742	CACAGAGAAGAGCATCAATGAGGACACAGGCCAAGTTCTTTGCCCTGCATCAGAGAAGTGA 801
Qy	786	cacagaagaagaacatcaacagcggaacccagagttctgcctgatacaagaagtga 845
Db	802	TGGTCTTGTGGCGGTGTACGCGGGGGGCGACCCCGCAGCAGAGATTTTGTGACATCGA 861
Qy	846	cggctcctgctgctgtaacgc 905
Db	862	GGACCCGTAACACAGGCGAGACGAGACCCCTGGGCGCAATTTG----AAAGCCTGAGAGGT 917
Qy	906	ggaccataaagcagagctccaagcccccttggcacaactgcaaaaaagcctccaaggtt 965
Db	918	TCAGACTGTGTACGCTTTGACATCCCTCTGTGAAACAGCATGATAATAAAC 968
Qy	966	ttgcactgctcagctctgacatccctctcttggaagaagatgaataaacc 1016
RESULT	5	
LOCUS	S82718	1007 bp mRNA ROD 12-MAR-1997
DEFINITION	TMP-2-testicular tissue inhibitor of metalloproteinases-2 [rats, Sprague-Dawley, testes, mRNA, 1007 nt].	
ACCESSION	S82718	
KEYWORDS	91881813	

SOURCE	Rattus sp.
ORGANISM	Eukaryotes; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheraia; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
REFERENCE	1 (bases 1 to 1007)
AUTHORS	Grima,J., Calcaagno,K. and Cheng,C.Y.
TITLE	Purification, cDNA cloning, and developmental changes in the steady-state mRNA level of rat testicular tissue inhibitor of metalloproteinases-2 (TIMP-2)
JOURNAL	J. Androl. 17 (3), 263-275 (1996)
MEDLINE	96384329
REMARK	GenBank staff at the National Library of Medicine created this entry [NCBI glibsd 179018] from the original journal article. This sequence comes from Fig. 2A.
FEATURES	Location/Qualifiers
source	1..1007
gene	/organism="Rattus sp." /db_xref="taxon:10118" 219..881 /gene="TIMP-2" 219..881 /gene="TIMP-2" /note="Testicular tissue inhibitor of metalloproteinases-2; This sequence comes from Fig. 2A"
CDS	/codon_start=1 /product="TIMP-2" /db_xref="PID:g1861814" /translation="MGAARSLRALGILLATLRLPADACSPVHPQAFNCADAVY IRAAKSEKEVDNDIKNRIQRYEIKDKIFKFGPKDIEFTYASAVGVSL DVAGKEKLIAKGAKGDGMKITTLDFIPDDTSLIQKSLNTRYONGCECKITRPD MIPCIVSSPDCELMMDWTERTKSINHQAFFACKLRSDSCAWIRGAAPRPHLEIDIE DP"
BASE COUNT	236 A 302 C 294 G 175 T
ORIGIN	
Query Match	59.1%; Score 610; DB 14; Length 1007;
Best Local Similarity	91.1%; Pred. NO. 0.00e+00;
Matches	704; Conservative 0; Mismatches 64; Indels 5; Gaps 2;
D	212 GCCCGCCATGGGCGGCCGCGCCGCAGCCTCCGGTGCGGTCTGCTGTGAC 271
O	
Y	246 gccgcgcataggcgccggcggccgaaccttgsgtgcgtccctctgtgtgac 305
D	272 CACGCTGCTGCGCCCGCGCGACGCTGTGAGTCTCCCGGTGCAACCGCAAGAGCCTT 331
O	
Y	306 gagctgtctgccgcgcgcgcagctgcagtctcccgtgcaccgcgaacagcggt 365
D	332 TTGCATGTCAGACGTATGATCATGGGCCAACACATGACGACGAGAAGAGTGGATTCCGG 391
O	
Y	366 ttgcaatgcaagtgttagtgtatcagaagccagtcagtgaaagaaagtgtgactctg 425
D	392 GAATGACATCTATNGGCACCACCCATCAAGAGGATTCATTAATGAGATCAACAGATTAAGAT 451
O	
Y	426 aaagcacatttttggaaccatcaagaggtatcagtatgatacaagcaatagaat 485
D	452 GTTTCAAAGACCTGACAAAGACATGAAATTTACTACAGGCGCCCCCTCTCTGACAGTGTG 511
O	
Y	486 gtccaaggccttgagaagatatagattatctaacaagcgccctctctgcaagtgtg 545
D	512 CGGGGTCTCGTGGAGCGTTGGAGAAAAGAGAAATCTTAATTGACAGGAGCGGAGAG 571
O	
Y	546 tgggtctcgtcgtgagcgttggaagaaagaatatcatcttcagtaagaaagtcagag 605
D	572 AGATGGCAAGATGACATTAACCTCTGTGATCTTATGTGGCCCTGGGAGACGCTTAGAT 631
O	
Y	606 gaagcgcaaatgacataccatccctctgtacttcaatcgcgtcccttggaacacctgagac 665
D	632 CACCCAGAGAAGAGCCTTAACACACAGTACAGATGGGCTCGAGTGCAGATCACAG 691
O	
Y	666 caaccagaagaagagctgaaccacaggtaccaaagtatgggtctgagtgcaagatacaag 725
D	692 CTGCCCTATGATCCATGCTACATCTCTCCCGGATGAGTGGCTCTGCATGAGATGGGT 751

OY	726	ctgcccatgatacccgtagtactatcctctcccgcagagtgacctcgtgatggactggt	785	
Db	752	CACAGAGAAGGATCAATATGGCGCACACGAGCCAACTTCTTGTCGCATGAAGAGACTGA	811	
OY	786	cacagaagaacaatcaaacaggcgacacaggccaagtcttcgcctgcattcaagaagaatga	845	
Db	812	TGGTTCTTGCCGCGGTGATCCGCCGGGGGGGACACCCCCGAAGAGAGGATTCTTGACATGA	871	
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Db	872	GGACCCTTAAGCAGAGGCTGACAGAGGCCCTCTGTGGCCAATTG---AAAAGCCTCTGAGG	927	
OY	906	ggaccataagaagcgccctccaagcggccc-tgtggccaactgcaaaaaagcctccaagg	964	
Db	928	TTGACATGGGTCCAGACTTTGACATCCCTTCTCTGGAAAGCATGATTAATAACA	980	
OY	965	tctgcactggtcacgctctgcatactcctctctctcgsaaacagatgaataaaca	1017	
RESULT LOCUS	6 S72594	1009 bp mRNA ROD	05-JAN-1995	
DEFINITION	TIMP-2-tissue inhibitor of metalloproteinase type 2 [rats, Fischer, PC Cl 3 cell line, mRNA, 1009 nt].			
ACCESSION	S72594			
NID	g919232			
KEYWORDS	Rattus sp. Fischer PC Cl 3 cell line.			
SOURCE ORGANISM	Rattus sp. Eukaryote; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.			
REFERENCE	1 (bases 1 to 1009) Santoro,M., Battaglia,C., Zhang,L., Carlomagno,F., Martelli,M.L., Salvatore,D. and Fusco,A. Cloning of the rat tissue inhibitor of metalloproteinases type 2 (TIMP-2) gene: analysis of its expression in normal and transformed thyroid cells Exp. Cell Res. 213 (2), 398-403 (1994)			
JOURNAL MEDLINE	Genbank staff at the National Library of Medicine created this entry [NCBI gisbq 153441] from the original journal article.			
REMARK				
FEATURES	Location/Qualifiers			
source	1..1009 /organism="Rattus sp." /db_xref="taxon:10118"			
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CDS	/gene="TIMP-2" 230..892 /gene="TIMP-2" /note="This sequence comes from Fig. 1A."			
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Query Match	59.1%; Score 610; DB 14; Length 1009;			
Best Local Similarity	91.1%; Pred. No. 0.00e+00;			
Matches	704; Conservative 0; Mismatches 64; Indels 5; Gaps 2;			
Db	223 GCCCGCATGGCGCGCGCGCGCGCGAGCTCCGCGCTGGCGGCTCGGCGCTCCGCTGCTGCGC			282
OY				
246	gccgcacatggcgccgcgcgcgcacacaccttgtgcgtgcctcgccctcgtcgtcgtgc			305

[illegible]

RESULT	8		
LOCUS	MMTMP2	1714 bp	RNA
			ROD
			30-JUN-1993

DEFINITION *M.musculus* TIMP-2 mRNA for tissue inhibitor of metalloproteinases,

ACCESSION	X62622	S37984
NTD	g54801	

WORDS	inhibitor of matrix metalloproteinases; TIMP-2 gene; tissue
RCE	inhibitor of metalloproteinases, Type 2.
ORGANISM	house mouse.
	Mus musculus

REFERENCE
1 (bases 1 to 1714)

AUTHORS Shimizu, S.
TITLE Direct Submission
JOURNAL Submitted (14-OCT-1991) S. Shimizu, pathophysiology Unit, Aichi

REFERENCE
Cancer Center Research Institute, 1-1 Kanokoden, Chikusa-ku, Nagoya
464, JAPAN
2 (bases 1 to 1714)

AUTHORS	Shimizu, S., Malik, K., Sejima, H., Kishi, J., Hayakawa, T. and Koizumi, O.
TITLE	Cloning and sequencing of the cDNA encoding a mouse tissue

Inhibitor of metalloproteinase-2
Journal Gene 114 (2), 291-292 (1992)
MEDLINE 92290292

FEATURES	Location/Qualifiers
source	1. .1714
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/cell_line="embryonic fibroblast (3T3)"

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    /gene="mouse TIMP-2"

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CDS 227..889
/gene="mouse TIMP-2"
/codon start=1

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/db_xref="PID:g54802"
/db_xref="SWISS-PROT:P35785"

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227. 304
Dpⁿ
MIPCYISSPDECLMNDWTERKSLNGHQAKFPACIKRSDGSCAWYRGAAAF
slg peptide

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mat_peptide 305.886 /gene="mouse TNP-2" /gene="mouse TNP-2"
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gene mouse strain	/product="mature Tissue Inhibitor of metalloprotease Type 2"
978	985

BASE COUNT	347 a	520 c	474 g	373 t
ORIGIN				

Query Match	58.9%;	Score 608;	DB 14;	Length 1714;
Best Local Similarity	90.7%;	Pred. No. 0.00e+00;		
Matches 700; Conservative	0;	Mismatches 68;	Indels 4;	Gaps 0;

[illegible]

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Db	280	CTCGCTCGTGCAGCCGCGCGACGCGCTGCGAGCTGCTCCCGCTGTCACCCGCAACAGCGATT	33
Oy	306	gagcctgcttcgcgcgcgcgcgacgcctcgagctgctcccgctgcacccgcaacagcgctt	36
Db	340	TTTCATTCGACGACGCTGCTATCAGAGCCAAAGCATGACGGAATAGAGAGCTGGAATTCCGG	39

Db 400 GAATGACATCTATGGCAACCCCATCAGAGAGATTTCAGTASAGATCAAGCAGATAAGAT 455

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486 gtctaaaggcctgagaagatataagattatctacacgccccctcctcgagtg 54

Db 520 CGGGGTCCTCGCTGGACGTTGGAGCAAGAGAGACTATCTAATTGGCAGGAAGGCAGAAAG 57
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 07 546 tggggtctctgagacgattggagagaaagaaagatatctcatctgcaggaagggccgaggg 60

D6 580 AGATGCGAGATGCACATTACCCTGTGCACTTATTTGTCCCTGGGACAACGCTAGCAT 63
606 ggacggcaaaatgacataccaccctgtgatattcatgtgccttggacaacctgaagcac 66

Db 640 CACCCAGAGAGAGCCTGAAACACACAGTACACAGATGGGCTGTGAGTGCAGATCATTG 69

Qy 666 caccagaagaagagcctgaaccaacaagytaccagaatcygctcgagtgcaagaatcaagc 72

Db 700 ctgtcccatgatcccttgctacatctcctcccgatgagtgsccttgatgagactgggt 75

QY 726 ctgcccatgatcccgctgcatcatctctcccccgaagagtgctctgtagtgactgggt 78

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Qy 846 cggctcctgtgctgttaccggcggcggcggcccccagaagagagtcttcgcacatcga 90

Db 880 GGACCCGTTAAGAGGCTGACACAGCCCCCTGTGGCCAATTG----AAAAGCCTGAGGCT 93

906 ggaaccataagcagcgcctccaacgcgcctctgycacaactgcacaaaaaagcctccaaggtc 96

Db 936 TTAGACTGGTCCAGCTTTTGACATCCCTTCCTGGAACAAGCATGATATAAACA 987
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Oy 966 ttccactggtccaagctctgacatcccttcctggaacaagcatataaaca 1017

RESULT 9

LOCUS	BOVMET	1047 bp	MRNA	MAM	15-SEP-1990
DEFINITION	Bovine metalloproteinase inhibitor mRNA, complete cds.				

ACCESSION M32303
NID g163341
KEYWORDS metalloproteinase inhibitor.

SOURCE	ORGANISM
Bovine aorta endothelium, cDNA to mRNA.	<i>Bos taurus</i>
Eukaryotae: mitochondria] eukaryotes: Metazoa: Chordata:	

REFERENCE
1 (bases 1 to 1047)
Bovidae; Bovinae; Bos.
Lama; Lamacidae; Camelidae; Camelinae; Camelus; Camelus
vertebrata; Eutheria; Artiodactyla; Ruminantia; Pecora; Bovol
Bovidae; Bovinae; Bos.

AUTHORS	TITLE
Boone, T.C., Johnson, M.J., De Clerck, Y.A. and Langley, K.E.	CDNA cloning and expression of a metalloproteinase inhibitor related to tissue inhibitor of metalloproteinases

JOURNAL
MEDLINE
COMMENT
Draft entry and computer-readable sequence [1] kindiv submittt
Proc. Natl. Acad. Sci. U.S.A. 87, 2800-2804 (1990)
90207285

[illegible]

OY	306	gaacgtgctgcgccgcgcgaagccttgcaagtcgtcccccggcgacaaccgcgaacaggcytt	365
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OY	366	ttyccaatcagaatgtatgatataagggccaaacggttcaagttagaagyaagttgacctag	425
Db	382	GAAATGACATCTTGTGGCAACCCTCATGAAGAAGATTCMAATTGATGATCAACACATTAAGAT	441
OY	426	aaacgaacattttcttggcaaccctatacaaggygttccagttctgatalcaagcagataaagt	485
Db	442	GTTCAAAGGACCTGACAAAGGACATCGAATTATCTACACGSCCCCCCTCCTCACGATGTG	501
OY	486	gttcaaaggyccctgaaagyalatatagagttttcttaacagccccctctctcgscagtgy	545
Db	502	CGGGGTCTCGCGGACGCTTGGAGGAAGAAGGAATATCTAATTGCAAGGGAAGCGGAAG	561
OY	546	tggggtctctgcgcgtgtggaagaagaayaataatcttccattctgcgaagaagccgaagg	605
Db	562	AGATGGCAAGATGACATATTACCTCTGTACTTATTTGTGCCCTGGAGCACGCTTACAT	621
OY	606	ggaagcgcaagatgacatcacactctgtacttcaatcgtgcccctggagcacacctgacac	665
Db	622	CACCCAGAAGAAGACCTTAACACAGGTACCAAGNTGGGCTCGAGTGAATATACANAG	681
OY	666	caccagaagaagaagaccggaaccaagaaacagatggctgcgagtgaagaalcaacgsg	725
Db	682	CTGCCCTTATGATCCCATGCTATCATCTCCCTCCCAGTAGTATCCCTTGATGAGCTGGGT	741
OY	726	ctgcccacatgatccgcgtgtatacatctctcccgcgagcggtgccttgtatigtactgggt	785
Db	742	CACARAGAAGACATCATGATGGGCACACAGGCCCAAGTTCTTGCTGCTGATCAAGANAATA	801
OY	786	cacaaagaagaacatacaacaagygccaccagggccaagttcttcgctgtataaagaagtga	845
Db	802	TGGTCTTGTGCGGCTGTGATCCGGGGGCGGACCCCGAAGACAGAGATTTCTTGACATCGA	861
OY	846	cggctccctgtgtgtgtaacgcgysgcgycgcgcgcccccacaagcagagtttctctgacatga	905
Db	862	GGACCCGTAAGCAGGCTGACAGAGCCCTCGCGGCCAATG-----AAAAGCTGTAGGG	917
OY	906	ggaaccataagaagagccttccaaacgccc-tgtgycccaactgtcaaaaaaaagcctccaaggg	964
Db	918	TTACAGATCGTCTGAGTTTGGATCCCTTCCTCGGAAAAAGC	958
OY	965	tttgcactggttccagctctgtacatcccttccctggaacagc	1005

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9. .671	/function="metalloproteinase inhibitor"		
9. .671	/evidence=experimental		
9. .671	/product="TIMP-2"		
9. .671	/db_xref="PID:9202054"		
9. .671	/translation="MGAARSRRLAHGILLASLRPADACSSPYHQQAFCNADVV		
9. .671	IRAAVSEKEVDGSGNDITGNPIKRIQETIKQIKMFKGPDKIDFTIYAPSSAVCGVSI		
9. .671	DVGKREKYLIAAGKAGDGMKAITLQDFIVPMDTISITQKSLNHRVYMGCECKITRCE		
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Query Match	54.48;	Score 562;	DB 14;	Length 676;
Best Local Similarity	91.68;	Pred. No. 0.00e+00;		
Matches 619; Conservative	0;	Mismatches 57;	Indels 0;	Gaps 0

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OY	245	ggccgcgcacatgggycgcgcgcgcgcgcacccctgcgctgycgtccctccgcctgc	304
Db	61	CGTCGCTGATGGGCCCGGCGCGAGCGCTCGAGGTGCTCCCGGTGCAACCGCAAGCGCT	120
OY	305	cgacgcctgcttgcgccgcgcgcgcgcctctgagctgtctcccggtgcacccgcaacgagct	364
Db	121	TTTGGCAATGACAGCTAGTGTGATCAGAGCCAAAGCAAGTGAAGAGAGAGAGTGGATTCCG	180
OY	365	ttctgcacgtcagatgfatgagatcaaggccaaagcgtctagtgaaagaaagatgagactctg	424
Db	181	GGAAATGACATCTATGGCAACCCCATCAAAAGATTCAGATTCAGATATGATCAAGCATGATAA	240
OY	425	gaaacgacacttattgycaacccctataaaggatccagatagatcaagcagataaaaga	484
Db	241	TGTTCAAAGACCTGTGCAAGAAGCATCGATTTATCTATCACACGCCCCCTTTAGCAGTGT	300
OY	485	tgttcaaaagggccttgaaagagatataagattatctacaagccccctctcgcagctgt	544
Db	301	GGGGGGTCCGGTGGACGTTGGAGGAAAGAGAGATTAATTGGCAGAAAGCGCAGAG	360
OY	545	ggggggctcgcctgagcgtctggaagaagaagaatatctcatcttggaagaagccgag	604
Db	361	GAGATGGCAGATGCGACATTACCTCTGTGACTTCAATTGGCCCTGGGACACGCTTAGCA	420
OY	605	gggaagcgcgaagtgcacatcacccctctgacttcatctgtcccttggacaccccttga	664
Db	421	TCACCCAGAGAAGAGCCGTAACCAACAGGTACCAGATGGCGTGTAGTCCAGATACATC	480
OY	665	ccaccacagaagaagagcctgcgaaccacaaagtlaccagaatggtgcgagtgcaagatla	724
Db	481	GGTGTGCCATGTATCCCTTCTCTACATCTCTCCCGGATAGTGCCTGTGATGGAATGGG	540
OY	725	gctgcgcccatgctccgcgtgtcatactctctcccggaagcagtgctctgtatgagactg	784
Db	541	TCACAGAGAAGAGCATCAATGGGACACGACGCAAGTTCTTCGCTTCGATCGAAGAGAAGTG	600
OY	785	tcaacagaagaagaatcatcaacgycgaccagyccaagttcttcgcctcatcaagaagag	844
Db	601	ATGGTCTTGTCCGCTGTGTAACCGGGGGGGCGACCCCCCAAGCAAGAGTTTCTTGACATGG	660
OY	845	acggctcctcgttgcgtgtatccgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgcgc	904
Db	661	AGGACCATTAAGCGG 676	
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RESULT	12			
LOCUS	HSTIMP2M	555 bp	RNA	PRI
				24-APR-1992

[illegible]

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QY	760	gacgagtgccctgctgactgctggtaccagagaagaacatcaacgagccacacgagccaa	819
Db	481	TTCCTCCCTCCTCATCAGAGAAGTGACGGCTCTCTGTGCGTGTAACCGCGCGGCGCCC	540
QY	820	tcttcgctgcatacaagaagtgacgctcctctgctgctgacgagcgagcgcc	879
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QY	880	cccaagcagaagtt 893	
RESULT	13		
LOCUS	CGRAMP	597 bp	RNA
			ROD
			25-NOV-1993
DEFINITION	C. longicaudatus mRNA for tissue inhibitor of metaro proteinase.		
ACCESSION	X75924		
NID	g414876		
KEYWORDS	Tissue inhibitor of metaro proteinase.		
SOURCE	long-tailed hamster.		
ORGANISM	Cricetus longicaudatus		
REFERENCE	Eukaryotes; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae; Cricetinae; Cricetulus.		
AUTHORS	1 (bases 1 to 597)		
JOURNAL	Suzuki, Y.		
AUTHORS	Unpublished		
TITLE	2 (bases 1 to 597)		
JOURNAL	Suzuki, Y.		
FEATURES	Direct Submission		
source	Submitted (02-NOV-1993) Y. Suzuki, Suntory Pharm-Tech Center, 370-05 Aitahi 216, Chiyoda-machi, Ohra-gun, Gumma, JAPAN		
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	primer_bind		
	1..590		
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	9..590		
	mat_peptide		
	9..590		
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	ORIGIN		
	Query Match		
	49.0%: Score 506; DB 14; Length 597;		
	Best Local Similarity 93.2%: Pred. No. 0.00e+00;		
	Matches 546; Conservative 0; Mismatches 40; Indels 0; Gaps 0;		
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QY	328	gcttcgagctctcctccggtgacccggaagaagcggttttgcaatgcagatgtagtgc	387
Db	66	AGGCGCAAGCAGTAAAGCAGAGAAGAGGTGATTCGCGGAACGACATTCAGCCACCCC	125
QY	388	agggccaagcaggttcagtgagaaagtgactctgtaaacgacattatgcaacct	447
Db	126	ATCAAGAGATTCATATGATGATCAGACAGATTAAGATGTTCAAGGCCCTGACAAAGAC	185
QY	448	atcaagagatcccgatagatcaagcagataagatglttcaaaagcgcttgagaagat	507

Db	Accession	Source	Definition	LOCUS	Size	Map	Accession	Source	Definition	LOCUS	Size	Map
Db	186	ATCGAGTTTATCTACACAGGCCCCCTTCACAGAGTGTGGGGGTCTCGGTGACGTGGA	tmmp-2-metalloproteinase-2 tissue inhibitor {promoter} [human, Genomic, 970 nt].	568860	970 bp	DNA	PRI	22-SEP-1994				
Qy	508	atagagttatctacaagggccccctccgcgcagtgctggtgttcctgctgagcttgga										
Db	246	GGAAAGAGAGATCTAATTGACAGAAAGCAGAAAGGGATGGCAGATGACATTAC										
Qy	568	ggaagaagagatattcattctcgtcaggaaagcgagggggggaagtgatgacattacc										
Db	306	CTCTGTGACTTCATTGTGTGCTGGACACACTGAGACACACCCAGAAAGAGCTGAAC										
Qy	628	ctctgtgacttcatctgctgccttgagaccctcgagcacaccaccagaagaagagctgaac										
Db	366	CACAGTACACAGATGGGCGTGGAGGCAAGATCACACGCTGGCCCATGATCCCATCTAC										
Qy	668	cacaggtaccacaatggtgctgcagtgcaagatcaacgctgctcccatgattccgtgtac										
Db	426	ATCTCTCTCCCGGAGAGAGTGTCTGTGATGTGACTGGGTACAGAGAAAGCATCAACGG										
Qy	748	atctctctcccgagagagtgctctcgtgagtgtgctggtgtacagagaagacattcaagg										
Db	486	CACCAAGCCCAAGTTCTTTGCTGCTGCATCAAGAGAGAGTGCAGCTCTTGGCCATGTAACGC										
Qy	808	caccagcgcaagttctcgtcgtcatcaagaagaatgacgctcctgtgctggtacgcg										
Db	546	GGAGCGGACCCCTTACAGAGAGTTCCTCCGATCAGAGACACCAT										
Qy	868	ggcgcggcgcccccaagcagagattcttcgcacattcagagaccat										
Db	546	GGAGCGGACCCCTTACAGAGAGTTCCTCCGATCAGAGACACCAT										
Qy	868	ggcgcggcgcccccaagcagagattcttcgcacattcagagaccat										
Db	546	GGAGCGGACCCCTTACAGAGAGTTCCTCCGATCAGAGACACCAT										
Qy	868	ggcgcggcgcccccaagcagagattcttcgcacattcagagaccat										
Db	546	GGAGCGGACCCCTTACAGAGAGTTCCTCCGATCAGAGACACCAT										
Qy	868	ggcgcggcgcccccaagcagagattcttcgcacattcagagaccat										
Db	546	GGAGCGGACCCCTTACAGAGAGTTCCTCCGATCAGAGACACCAT										
Qy	868	ggcgcggcgcccccaagcagagattcttcgcacattcagagaccat										
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Qy	868	ggcgcggcgcccccaagcagagattcttcgcacattcagagaccat										
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Qy	868	ggcgcggcgcccccaagcagagattcttcgcacattcagagaccat										
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Qy	868	ggcgcggcgcccccaagcagagattcttcgcacattcagagaccat										
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[illegible]

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	/gene="TIMP-2"
mat_peptide	95. .676

BASE COUNT	/product=tissue inhibitor of metalloproteinase-2			
ORIGIN	176 a	254 c	259 g	125 t

Query Match	34.9%;	Score 361;	DB 16;	Length 814;
Best Local Similarity	79.7%;	Pred. No. 2.83e-229;		
Matches 484;	Conservative 0;	Mismatches 123;	Indels 0;	Gaps 0;

Dp	80	CGCCCGGCGACGCTGGAGCTGCTCCGCCATCCACCCGAGACGAGCGCTTCCATAGGCC	139
Qy	316	cgcccgcgacgagcgcctcgagctgtctcccggtgcacccgcaacagcggttttcgatgca	375
Dp	140	GAGCTAGTATCCGAGCAAGACGCGCTCTCGGCGAAGAGGTGGATTCCAGGAAATGACATT	199
Dp	376	gatttatgtatcaaggcccaagaacggttcagttgagaagaagtgtgactctgtgaacgcatt	435
Qy	200	TATGGGAACCCCATCAAGCGCAATTCACAGCAACTGAAAGCAAGATCAAGATGTTTAAGGCG	259
Dp	436	tatggcaacccctatcaagaagatcccaatgataagatacaagcagataaagaagttcaaaagg	495
Qy	260	CCGACACGAGCATTCGATTTCATCTAGACGGCGCCGCTCCACGAGGTGTGGGACAGCT	319
Dp	496	cctgaagaaggtatagtagtttatctatcaacggccccctctcgtgagttgttgggtctcg	555
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Qy	556	cttgagcgttttgaagaagaagaagatattctatttgcagaagaagcggtggtgagcgtgaag	615
Dp	380	ATGCACATCAACGCTGTGTGACCTGTTGACCCACTCGGGAGACTCGGAGACCCACACCAAG	439
Qy	616	atgcacatcaacacctctgtgacttcatctgtgacctggaacacctgagcacaccagaag	675
Dp	440	AAGACCTCAACACGCGGTACACAGATGGGCTGCGATGTCAGATCTTCGCGCTCCCTCTCC	499
Qy	676	aagagcctgaacccacaggtaccagatggtgctgcagtgcaagatcaacgcgtgcacctat	735
Dp	500	ATGCCCGGCTTCGTCCTCTCTCTCCGATGAGTGCCTTCGAGACAGCTGCGGAGTGGAGAA	559
Qy	736	atcccggtctacactctctctcccggaagtgctctctgtgattgactgtgtgtcaagaaga	795
Dp	560	ATCTGTGGCGGGCGGACGGCCAAACATAGCGCTGATCAAGAGAGACGAGCGCTGTGC	619
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Dp	620	GCTGTGTAACGCGGCATGCGCCCGCCGAGACGAGGATTTCTCGACATCGAGACCCCTAA	679
Qy	856	gcgtgtgtacgcggtgcggtgcgcccccagaagaagattctctgcacatcgtgagaccataa	915
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Qy	916	gcgaagcc 922	

Search completed: Mon May 4 14:13:19 1998
Job time : 2867 secs.


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Db      361 AGTACGGCTCCTCGGTGAGTGATCCGGGNGGCCGCACCACAAGAGAAGTTTCAGAC   420
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Zy     841 agtcaaggctccgtcgcgvtgatcccggcgagcgccccccaagaacgaagtatttcgaa    900
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Db      421 ATCAGAGCAACCATATAGAGAAGGCTCCAAGGCCCTGTGTGGCCAACTTGTCAAATAAAGACTC   480
|       |||||                                     |         |||||
QY     901 atcgagaccataatagagcgccttaaacgcccccgttgccaact-gaaaaaaa-gocic   958
|       |||||                                     |         |||||
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QY     959 caa-gggtttt-cgact-gtccagcatctgacaacctt   993
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RESULT          3 AA486280        467 bp mRNA EST            11-AUG-1997

LOCUS           3 AA486280        467 bp mRNA EST            11-AUG-1997

DEFINITION      abj5908.s1 Striatene HeLa cell s3 937216 Homo sapiens cDNA clone
                M284846 3' similar to gb:S48568 TISSUE INHIBITOR OF
                METALLOPROTEINASES II PRECURSOR (HUMAN)..

ACCESSION      G2216496
WORD           EST.
ORIGIN         human.
ORGANISM       Homo sapiens
               Eukaryote; mitochondrial eukaryotes; Metazoa; Chordata;
               Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominiidae;
               Homo.
REFERENCE      1 (bases 1 to 467)
AUTHORS       Hillier,L., Allen,M., Bowles,J., Dubouque,T., Geisel,G., Jost,S.,
              Kucaba,T., Lacey,M., Le,N., Lennon,G., Marra,M., Martin,J.,
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              White,X., Wylie,T., Waterston,R. and Wilson.R.
TITLE          Masnu-Merck Est Project 1997
JOURNAL        Unpublished (1997)
COMMENT        Contact: Wilson RK
                  Washington University School of Medicine
                  4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
                  Tel.: 314 286 1800
                  Fax: 314 286 1810
                  Email: est@watson.wustl.edu
                  This clone is available royalty-free through LMU.; contact the
                  IMAGE Consortium (info@image.llnl.gov) for further information.
                  Seq primer: -41m3 fwd. ET from Amershams
                  High quality sequence stop: 451.
                  Location/Qualifiers
                    1..467
                     /organism="Homo sapiens"
                     /note="Vector: pBluescript SK-. Site_1: EcoRI. Site_2:
XhoI; Cloned unidirectionally. Primer: Oligo dr. HeLa S
epithelioid carcinoma cells grown to semi-confluency
without induction. Average insert size: 1.5 kb; DN1-ZAP
vector. -5' adaptor sequence: 5' GAATTGGGCGAG 3' -3'
adaptor sequence: 5' CTGCAATTTTTTTTTTTTTTTT 3'"
                     /db_xref="taxon:9606"
                     /clone="842846"
                     /clone_id="Striatene HeLa cell s3 937216"
                     /sex="female"
                     /dev_stage="HeLa S3 cell line"
                     /lab_host="SOIR (kanamycin resistant)"
                     complement(<1..>467)
BASE COUNT      78 a 128 c 142 g 119 t
ORIGIN
Query Match             44.4%; Score 459; DB 25; Length 467;
Best Local Similarity 99.6%; Pred.No. 0.00e+00;
Matches 466; Conservative 0; Mismatches 1; Indels 1; Gaps 1;
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CP	956	ggtcttttgcagttgcccacagaaggcgcttgagagccttgttatggcttcgatgctg	897
Db	121	AGAACTCCTGCTTGGGGGGCGCCGCCG-CGCTTACCAACAGACAGAACCCGTACTTC	179
CP	896	agaactccctgcttggyggcgccgcgcygtagcacacagcagagccgtcaattctc	837
Db	180	TTCATGCAGCGGAGAACAATTGGGCTCGTGCCCCGTTGAATGTTCTTCTGTATACCACG	239
CP	836	tgtatgcagcggaagaacttggcctggtgcccttgatgattcttctctgtaccagcttc	777
Db	240	ATCCAGAGCACTCTCCGCGGAGAGATGTAGCACGGGATCATATGAGGCGACGCGTATC	299
CP	776	atcccgagagcactgctccgggagagagtgtagcagcggtaccaaggagcagcgtagtc	717
Db	300	TTCACATCGACACCCCATCTGTACCTGTGTTGTTAGAGGCTCTTCTTCTGGGTGCTCAG	359
CP	716	tgtacatcgacgcccatctgtagctctggtatcagagctctctctctcttggtgtagtc	657
Db	360	GTCGTCCAGGCGACATATAAGTCACAGAGGGTGATGTGATCTTCCCTCCCCTCGGCC	419
CP	656	gtgtcccgagcgacatgaafcacagaggggtgtagtgcatttgcgtccccctcgcc	597
Db	420	TTTCCGATGAGATATTCCTCTCTTCTCCTCAACGTCAGCGAGAGAC	467
CP	596	ttctctgcaatgagatatctctctctctccacaagctccagcgagacc	549
RESULT LOCUS	4 AA700818	464 bp mRNA EST	19-DEC-1997
DEFINITION	z169f06.s1 Soares fetal liver spleen INFLS S1 Homo sapiens CDNA clone 436067.3' similar to gb:s48568 TISSUE INHIBITOR OF METALLOPROTEINASES II PRECURSOR (HUMAN);.		
ACCESSION	AA700818		
NID	92703983		
KEYWORDS	EST.		
SOURCE ORGANISM	human. Homo sapiens Eukaryota; Metazoa; Chordata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.		
REFERENCE	1 (bases 1 to 464)		
AUTHORS	Hillier,L., Allen,M., Bowles,L., Dubuque,T., Giesel,G., Jost,S., Krizman,D., Kucada,T., Lacey,M., Le,N., Lennon,G., Matra,M., Martin,J., Moore,B., Schellenberg,K., Stepoe,M., Tan,F., Thaising,B., White,Y., Wylie,T., Waterston,R. and Wilson,R.		
TITLE	WashU-NCI human EST Project		
JOURNAL	Unpublished (1997)		
COMMENT	Contact: Wilson RK Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108 Tel: 314 286 1800 Fax: 314 286 1810 Email: estevatson.wustl.edu This clone is available royalty-free through LINT ; contact the IMAGE Consortium (infoimage.lint.gov) for further information. Seq primer: -40m13 fwd, ET from Amersham.		
FEATURES	Location/Qualifiers		
SOURCE	1..464 /organism="Homo sapiens" /note="Organ: Liver and Spleen; Vector: pTV73D (Pharmacia) with a modified polylinker; Site_1: Pac I; Site_2: Eco RI; This is a subtracted version of the original Soares fetal liver spleen INFLS library. 1st strand cDNA was primed with a Pac I - oligo(dT) primer [5' AAGCGAGCAATTAATTAACAACATCTTTTTTTTTTTTTTTT 3'] double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Pac I and cloned into the Pac I and Eco RI sites of the modified pTV73 vector. Library went through one round of normalization. Library constructed by Bento Soares and M.Fatima Bonaldo." /db_xref="GDB:1335836"		

	KEYWORDS	EST.
	SOURCE	human.
	ORGANISM	Homo sapiens
		Eukaryote; mitochondrial eukaryotes; Metazoa; Chordata;
		Vertebrata; Eutheria; Primates; Catarrhini; Homnidae; Homo.
	REFERENCE	1 (bases 1 to 489)
	AUTHORS	Hillier L., Clark N., Dubuque T., Elliston K., Hawkins M., Holman M., Hultman M., Kucaba T., Le M., Lennon G., Marra M., Parsons J., Rifkin L., Rohlfing T., Soares M., Tan F., Trevaskis E., Waterston R., Williamson A., Wohlmann P. and Wilson R.
	TITLE	The Mashu-Merck EST Project
	JOURNAL	Unpublished (1995)
	COMMENT	Contact: Wilson RK Mashu-Merck EST Project Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108 Tel.: 314 286 1800 Fax: 314 286 1810 Email: est@watson.wustl.edu This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Insert length: 627 Std Error: 0.00 Seq primer: mob.REGA+ET High quality sequence stop: 356. Location/Qualifiers 1. 489 /organism="Homo sapiens" /note="vector: pRT3D (Pharmacia) with a modified polylinker V-TPRE; Phagemid; Site.1: Not I; site.2: Eco RI; TGTTACCACTGATGAAGTGAGGGCGGCAGATTGTGTGTGTGT 3', double-stranded cDNA was size selected, ligated to Eco RI adapters (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of a modified pTV vector (Pharmacia). Library went through one round of normalization to a Cot = 5. Library constructed by Bencic Soares and M.Fatima Bonaldo." /db_xref="taxon:9606" /clone_id="325120" /issue_type="senescent fibroblasts NBHSF" /lab_host="DH10B (ampicillin resistant)" complement(<. >489) BASE COUNT 82 a 126 c 148 g 131 t 2 others
	ORIGIN	mRNA
	BASE COUNT	
-	Query Match	42.2%; Score 436; DB 16; Length 489; best Local Similarity 98.5%; Pred. No. 0.00e+00; atches 462; Conservative 0; Mismatches 3; Indels 4; Gaps 4;
Db	21	GGGAGTAGTGTTCATTCATGCTGTTCCAGAGAGGATGTCAGAGCGTGCAGCATGTGAA 80
Cp	1025	gggaagagtgcttattcattacgctgctttccagaagaaggatcgcaagctggaccagtcgaa 966
Db	81	ACCCTTGAGGAGCTTTTTTTCAGATGAGCACAAGGGGCGCTTGAGAGCCGTATTAGGCTCC 140
Cp	965	acccttgagagcttttttttcagttgtgcacaaggggagcttgaaagctctgttaagggttc 906
Db	141	TCGATGTCGAGAAGACTCTGCTTGGGGGGGCCGCGC -GCGTNACACGACGACAGAGCC 199
Cp	905	tcatgtcgaagaactctcgtt -gggggggcccgcgcgcgcgtaccacagcagaagcc 847
Db	200	GTCACCTTCCTTGAGACGACGGGAGAACTTGGCCCTGGGTCGCCCGTTGATGATCTCTCTGT 259
Cp	846	gtcaattctcttgatgcagcgaaagaaacttgcctcgtgccccgtgatgttctctctgt 787
Db	260	GACCCAGTCATCCAGAGGACTGCTCCGGGGAGAGATGATAGACGGGATCATGGGCA 319
Cp	786	gaaccaagtccatcacgaagcaatcgtccgggggaagagatgtagaacggaacacaggggca 727
Db	320	GGCGGTGATCTTGACTGCAAGCCCATCTGTGATCTGTGATCTGTGAGGCTTCTCTGGGG 379

CP	726	gcgggtgatacttgtaactgcagccaccatcgttgaactctgtgtcagagcctctctc	959- 668
Db	380	TGtGtCtCAGGGGTGTCCAGGGCACGATGAAGTCAACAGAGGGGTGATGTGCAATTTGGCGT	439
CP	667	tgtgtcctcagaggtgtccacagggcacagatgaagtcacagaggtgtgtatcttcgcct	608
Db	440	CCCCCTGGGGCCTTCCGTGCAATGAGATTAATCCCTTTCTCTCCACAGT	488
CP	607	cacctccgg-ccttccctgcgaatgagatattcctcttctcccaagc	560
RESULT LOCUS	7	AAA00168	583 bp mRNA EST 09-NOV-1997
DEFINITION	zu69f08.r1 Soares testis NMT Homo sapiens cDNA clone 743271 5' similar to gb:S48568 TISSUE INHIBITOR OF METALLOPROTEINASES II PRECURSOR (HUMAN)..		
ACCESSION	AAA00168		
KEYWORDS	g2054120		
SOURCE	EST.		
ORGANISM	human.		
REFERENCE	Homo sapiens		
AUTHORS	Eukaryote; Metazoa; Chordata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.		
TITLE	1 (bases 1 to 583)		
JOURNAL	Hillier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S., Kitzman,D., Kucaba,T., Lacy,M., Le,N., Lennon,G., Maier,M., Martin,J., Moore,B., Schellenberg,K., Steptoe,M., Tan,F., Theising,B., White,Y., Wylie,T., Waterston,R. and Wilson,R.		
COMMENT	Mashu-NCI human EST project Unpublished (1997)		
FEATURES	Contact: Wilson RK Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108 Tel: 314 286 1800 Fax: 314 286 1810 Email: est@watson.wustl.edu This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Insert Length: 869 Std Error: 0.00 Seq primer: -28m13 rev2 ET from Amersham High quality sequence stop: 493. Location/Qualifiers		
source	1. 583		
FEATURES	/organism="Homo sapiens" /note="vector: pT73D-Pac (Pharmacia) with a modified polylinker: Site_1: Not I; Site_2: Eco RI; 1st strand cDNA was prepared from mRNA obtained from Clontech Laboratories, Inc., and primed with a Not I - oligo(dT) primer [5', TCTTACCAATCTGAACTGAGGGAGGGCGCCGCCCAATTTTTTTTTTTT 3']. Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT73 vector. Library went through one round of normalisation to Cot1, and was constructed by Bento Soares and M. Fatima Bonaldo." /db_xref="GDB:5930425" /db_xref="taxon:9606" /clone_id="743271" /clone_id="Soares testis NMT" /sex="male" /lab_host="DH10B"		
BASE COUNT	147 a 151 c 163 g 122 t		
ORIGIN	Query Match 41.1%; Score 425; DB 28; Length 583; Best Local Similarity 100.0%; Pred. No. 0.00e+00; Matches 425; Conservative 0; Mismatches 0; Indels 0; Gaps 0;		
Db	159	TCATCAGGCGCAACGCGTCACTGATGAGAGAGTGCATCTTGGAACACATTTATGGCA	218
CP	383	tatcaaggcccaaacggtcagtcgtgaggaagatgagactctggaacgacattatagca	442

Db 219 ACCCTATCAAGAGATCCAGTATGAGATCAAGCATTAAGATGTTCAAGGCGCTGAGA 278
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 Qy 443 accctatcaagagatccagtatgagatcaagcagataaagtgttcaagagcgctgaga 502
 |||||||
 Db 279 AGAATATAGAGTTATCTACAGCGCCCTCCCTCGGCACTGTGTGGGCTCGCTGGANG 338
 |||||||
 Qy 503 aggataataagttatctacacacgccccctcccgagctgtgtggtctcgtcgagcg 562
 |||||||
 Db 339 TTGGAGAAAGAGAAATATCTCATTCAGCAAGAGCCGAGGGGAGCGCAAGATGACACA 398
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 Qy 563 ttggagaaagagagatatctcatcttcagaaagcgagggagcgcaagatgacaca 622
 |||||||
 Db 399 TCACCTCTGTGACTTCATCGTGCCTGGGACACCTGACACCAACCAAGAAAGAGCC 458
 |||||||
 Qy 623 tcaacctctgtgacttcatctcgtgccttgagacacctgagacaccacagaaagagcgc 682
 |||||||
 Db 459 TGAACACAGAGTACAGAGGCGTGGAGTGAAGTACAGCGGCTGCCCAAGATCCGCT 518
 |||||||
 Qy 683 tgaacacagagtaaccagatggcgtgcagtgcaagatcacgcgcgtccccatgattccgt 742
 |||||||
 Db 519 GCTACATCTCTCCCGGACGAGTGCCTGTGATGGAGTGGGTCAAGAGAAACATCA 578
 |||||||
 Qy 743 gctaatctctcccccgcagagtgctcgtgagtgactgggtcacagagaagaacatca 802
 |||||||
 Db 579 ACGCG 583
 |||||||
 Qy 803 acgag 807
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 RESULT LOCUS 8 T48826 434 bp mRNA EST 08-FEB-1995
 DEFINITION yb05d08.r1 Homo sapiens cDNA clone 70287 5', similar to gb:S48568
 TISSUE INHIBITOR OF METALLOPROTEINASES II PRECURSOR (HUMAN).
 ACCESSION T48826
 NID g650686
 KEYWORDS EST.
 SOURCE human clone-70287 library-Stratagene placenta (#937225)
 vector-pBluescript SK- host-SOLR cells (kanamycin resistant)
 primer-M13Rpl1 RsaI-EcoRI RsaI-EcoRI Placental tissue from a
 Caucasian male. Cloned unidirectionally. Primer: Oligo dT. Average
 insert size: 1.2 kb; Uni-ZAP XR Vector; 5' adaptor sequence:
 5'-GAATTCGGCAGAG-3'; 3' adaptor sequence:
 5'-CTCGAGTTTCTTTTCTTTT-3'.
 ORGANISM Homo sapiens
 Eucaryotae; Metazoa; Chordata; Vertebrata; Gnathostomata; Mammalia;
 Eutheria; Primates; Catarrhini; Hominoidea; Homo.
 REFERENCE 1 (bases 1 to 434)
 HILLIER, L., CLARK, N., DUBUQUE, T., ELLISTON, K., HAWKINS, M.,
 HOLMAN, M., HULLMAN, M., KUCABA, T., LE, M., LENNON, G., MARRA, M.,
 PARSONS, J., RIFKIN, L., ROHLFING, T., TAN, F., TREVASKIS, E.,
 WATERSTON, R., WILLIAMSON, A., WOHLDMANN, P. and WILSON, R.
 WashU-Merck EST Project
 Unpublished (1995).
 TITLE Other-ESTs: yb05d08.s1
 JOURNAL Contact: Wilson RK
 COMMENT WashU-Merck EST Project
 Washington University School of Medicine
 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
 Tel: 314 286 1800
 Fax: 314 286 1810
 Email: est@wustl.wustl.edu
 High quality sequence stops: 391
 Source: IMAGE Consortium, LNLN.
 This clone is available royalty-free through LNLN; contact the
 IMAGE Consortium (info@image.lnl.gov) for further information.
 FEATURES
 SOURCE 1...434
 /organism="Homo sapiens"
 /clone="70287"
 BASE COUNT 111 a 109 c 125 g 86 t 3 others
 ORIGIN

Query Match 37.3%; Score 385; DB 10; Length 434;
 Best Local Similarity 97.4%; Pred. No. 0.00e+00;
 Matches 418; Conservative 0; Mismatches 6; Indels 5; Gaps 5;
 Db 7 TGGCAACCTATCAAGAGATCCAGTATGAGATCAAGCATTAAGATGTTCAAGAGGC 66
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 Qy 438 tggcaacctatcaagagatccag-tatgagatcaagcagataaagtgttcaagagc 496
 |||||||
 Db 67 CTGAAAGATATAGAGTTATCTACAGCGCCCTCCCTCGGCACTGTGTGGGCTCGC 126
 |||||||
 Qy 497 ctgaaagataatagttatctacacacgccccctcccgagctgtgtggtctcgc 556
 |||||||
 Db 127 TGGAGTTGGAGAAAGAGAAATATCTCATTCAGCAAGAGCCGAGGGGAGCGCAAG 186
 |||||||
 Qy 557 tggagttggagaaagagatatctcatcttcagaaagcgagggagcgcaagaa 616
 |||||||
 Db 187 TGCACATCAACCTCTGTGACTTCATCGTGCCTGGGACACCTGACACCAACCAAGAGA 246
 |||||||
 Qy 617 tgcacataacctctgtgacttcatctcgtgccttgagacacctgagcaccacagaga 676
 |||||||
 Db 247 AGAGCTGAACCAAGAGTACAGATGGGCTGGAGTGAAGTACAGCGGCTGCCCATCA 306
 |||||||
 Qy 677 agagcctgaaccacagatcacagatggcgtgcagtgcaagatcacgcgtgcccatga 736
 |||||||
 Db 307 TCCCGTCTACATCTCTCCCGGACGAGTGCCTGTGATGGATGGGTCAAGAGAG 366
 |||||||
 Qy 737 tcccggtct-acatctctcccccgcagagtgctcgtgagtgactgggtcacagagaag 795
 |||||||
 Db 367 AACATCAACGGGACACGAGGACAGTTNTTTCGCTTGNATCAAGAGA-GTACGGGCTTCT 425
 |||||||
 Qy 796 aacatcaacgggacacagagccaagttctt-cgctt-gatcaagagagtgagcgctct 853
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 Db 426 GTGCGTGTCT 434
 |||||||
 Qy 854 gtgcgtgtgt 862
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 RESULT LOCUS 9 WA9721 532 bp mRNA EST 11-OCT-1996
 DEFINITION zc43g09.r1 Soares senescent fibroblasts NBHSF Homo sapiens cDNA
 clone 325120 5' similar to gb:S48568 TISSUE INHIBITOR OF
 METALLOPROTEINASES II PRECURSOR (HUMAN).
 ACCESSION WA9721
 NID g1337986
 KEYWORDS EST.
 SOURCE human.
 ORGANISM Homo sapiens
 Eukaryotae; mitochondria eukaryotes; Metazoa; Chordata;
 Vertebrata; Eutheria; Primates; Catarrhini; Hominoidea; Homo.
 REFERENCE 1 (bases 1 to 532)
 HILLIER, L., CLARK, N., DUBUQUE, T., ELLISTON, K., HAWKINS, M.,
 HOLMAN, M., HULLMAN, M., KUCABA, T., LE, M., LENNON, G., MARRA, M.,
 PARSONS, J., RIFKIN, L., ROHLFING, T., SOARES, M., TAN, F.,
 TREVASKIS, E., WATERSTON, R., WILLIAMSON, A., WOHLDMANN, P. and
 WILSON, R.
 The WashU-Merck EST Project
 Unpublished (1995)
 TITLE
 JOURNAL
 COMMENT Contact: Wilson RK
 WashU-Merck EST Project
 Washington University School of Medicine
 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
 Tel: 314 286 1800
 Fax: 314 286 1810
 Email: est@wustl.wustl.edu
 This clone is available royalty-free through LNLN; contact the
 IMAGE Consortium (info@image.lnl.gov) for further information.
 Insert Length: 627 Std Error: 0.00
 Seq primer: MOD.RGAG+ET
 High quality sequence stop: 347.
 Location/Qualifiers
 FEATURES

source

1. 532
/organism="Homo sapiens"
/note="Vector: pT73D (Pharmacia) with a modified
polylinker V-type: phagemid; Site 1: Not I; Site 2: Eco
RI; TGTACCAATCAAGTGGAGGCGGCGGATTTTCTTTTCTTTT
3', double-stranded cDNA was size selected, ligated to
Eco RI adaptors (Pharmacia), digested with Not I and
cloned into the Not I and Eco RI sites of a modified pT73
vector (Pharmacia). Library went through one round of
normalization to a Cot = 5. Library constructed by Bento
Soares and M. Fatima Bonaldo."
/db_xref="taxon:9606"
/clone="325120"
/clone_1lb="Soares senescent fibroblasts NBHSP"
/tissue_type="senescent fibroblast"
/lab_host="DH10B (ampicillin resistant)"
<1. >532

BASE COUNT 130 a 157 c 143 g 99 t 3 others

ORIGIN

very Match 37.3%; Score 385; DB 16; Length 532;
1st Local Similarity 95.7%; Pred. No. 0.00e+00;
Matches 485; Conservative 0; Mismatches 6; Indels 16; Gaps 15;

Db 1 AGAGTTCAAAGGCGCTGAGAGAGATATAGATTATCTACAGGCGCCCTGCTGGGAG 60
QY 482 agatgttcaaaagggccgagagagatagattatctacagggcccttcgagcag 541
Db 61 TGTGTGGGCTCTGCTGAGCTTGAGAGAAAGAAAGATATCTGATTCAGAGAAAGCGC 120
QY 542 tgtgtgggctctgctgagcttgagagaaagaaagaaatattctatcttcaggaagggcg 601
Db 121 AGGGGAGCGCAATGACATCATCCTCTGTGACTGTGCTGCGCCGAGACCTCGA 180
QY 602 aggggagcgagaaatgacatcacctctgtgacttctgctgcccggagacaccgga 661
Db 181 GCACACCGAGAAAGAGCTGAACACAGAGTACAGAGGCGCGAGAGTCAGATCA 240
QY 662 gcacacccagaaagagcctgagacacaggtacagatggcgagatgacagatca 721
Db 241 CGCGCTGCGCCATATCCCGCTGCTACATCTCCCGGAGCAAGAGCTGTGATG 300
QY 722 cgcgctgccccatgattccc-gtgcatactctctccc-ggaaga-gggcctctgaggg 778
Db 301 ACTGGGTACAGAGAAATCATCAACGCGGACAGCCAAAGTTCTTGCTTGATCAA 360
QY 779 actgggtacagagaaatcatcaacgagccagggcca-gttcttcgctt-gatcaaa 836
361 AGAAGTGAAGNGCTCTGTGCGGTGATCCGGCTGGGGCGCCCGCCCAAGACGAGA 420
367 -gagaagtgac-ggctctctgag-gtggtaaccgagcgagcgcccc--aagc-aaga 890
Db 421 GTTCTCGAGATGAGAGACCATTAANAAGCCCTCAACGCGCCCTGTGGCCACTTGC 480
QY 891 gttcttc-gaatcagagagacacataagca-ggctcccaagccctgtt-ggccactt-gc 946
Db 481 AAAAAAGCCTTCNAAGCTTTGCACT 507
QY 947 aaaaaagcctt-ccaaggggttcgact 972

RESULT 10
LOCUS T53335 430 bp mRNA EST 08-FEB-1995

DEFINITION Y88B08.s1 Homo sapiens cDNA clone 68727 3' similar to gb:s48568
TSSUE INHIBITOR OF METALLOPROTEINASES II PRECURSOR (HUMAN).

ACCESSION T53335
MID 9655195
KEYWORDS human clone-68727 library-Stratagene placenta (#937225)
SOURCE vector-pBluescript SK- host-SOLR cells (kanamycin resistant)
primer-21m3 RsteI-EcoRI RsteI-XhoI Placental tissue from a
Caucasian male. Cloned unidirectionally. Primer: Oligo dt. Average

Insert size: 1.2 kb; Uni-ZAP XR Vector; 5' adaptor sequence:
5'-GATTCGCGACGAG-3'; 3' adaptor sequence:
5'-CTGAGCTTTTCTTTTCTTTT-3'.

ORGANISM

Homo sapiens
Eumetazoa; Metazoa; Chordata; Vertebrata; Gnathostomata; Mammalia;
Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE

1 (bases 1 to 430)

AUTHORS

Hillier, L., Clark, N., Dubuque, T., Elliston, K., Hawkins, M.,
Holman, M., Hultman, M., Kucaba, T., Le, M., Lennon, G., Matra, M.,
Parsons, J., Rifkin, L., Rohlfing, T., Tan, F., Trevaskis, E.,
Waterston, R., Williamson, A., Wohlmann, P. and Wilson, R.

WashU-Merck EST Project
Unpublished (1995)

TITLE

WashU-Merck EST Project

Other ESTs: y88B08.r1

Contact: Wilson RK

Washington University School of Medicine
444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810

Email: est@wustl.wustl.edu

High quality sequence stops: 368

Source: IMAGE Consortium, LBNL
This clone is available royalty-free through LBNL; contact the
IMAGE Consortium (info@image.lbnl.gov) for further information.

FEATURES

Location/Qualifiers

source

1. 430
/organism="Homo sapiens"
/clone="68727"

BASE COUNT 75 a 105 c 140 g 107 t 3 others

ORIGIN

Query Match 36.1%; Score 373; DB 10; Length 430;
Best Local Similarity 97.4%; Pred. No. 0.00e+00;
Matches 407; Conservative 0; Mismatches 6; Indels 5; Gaps 5;

Db 14 GGGAGTGAAGTATTTATCATGCTGTTCCAGAGAGAGATGTCAGAGTGCAGCCAGCGA 73
Cp 1026 gggagtgagtgcttattatcatcagctgttcagagagagatgacagctgca 967
Db 74 AACCTTGAGAGGCTTTTTCAGATGGCCACAGAGGCGCTTGAGAGGCTTATGAGGTC 133
Cp 966 aaccttgagagcttttttttcagtgagacagaggggttgagagctgttatgggctc 907
Db 134 CTCGATGTCAGAAATCTCTGCTTGGGGGCGCCGCGC-GCTAACAACAGCAGAGACC 192
Cp 906 ctctgctgcagaaactctctgttggggcgccgcgcgcggtacacagcagagagcc 847
Db 193 GTCACTTCTTTGATGAGAGGAGAACTTGCTGCTGCTGCTGCTGCTGCTGCTGCT 252
Cp 846 gtcaacttctcttgaagcagcaggaacttgcctggtgcccgttgaatcttctctgt 787
Db 253 GACCAGTCAATCCAGAGAGCACTGTCGGGAGAGAGATGAGACGAGATCATGGGCA 312
Cp 786 gaccagatcatcagagagcactgtccgagagagatgagacagagatcagagagagc 727
Db 313 GCGCGTGAATCTTGACCTGACAGCCCATCTGCTGCTGCTGCTGCTGCTGCTGCTG 372
Cp 726 ggcggtgacttgcactgcagcccatctgt-tacctgtgttcaagctctctctctgg 668
Db 373 GTNGTGTCTCAGAGGTTTCCAGAGGAGCAGATGAAAGTCAAGAGGCTTATGATCTT 430
Cp 667 -t-gtgtcagaggtgtccagag-cacgatgaagtcacagagaggtgagtgcattt 613

RESULT 11
LOCUS AAI83361 531 bp mRNA EST 15-FEB-1997

DEFINITION m096907.r1 Stratagene mouse testis (#937308) Mus musculus cDNA
clone 567612 5' similar to gb:s48568 TSSUE INHIBITOR OF
METALLOPROTEINASES II PRECURSOR (HUMAN); gb:x62622 M.musculus
TIMP-2 mRNA for tissue inhibitor of metalloproteinases, (MOUSE).

ACCESSION AAI83361

NID
KEYWORDS
EST.
91767539

SOURCE
house mouse.
Mus musculus

ORGANISM
Eukaryotes; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
Mus.

REFERENCE
1 (bases 1 to 531)
Marra, M., Hillier, L., Allen, M., Bowles, M., Dietrich, N., Dubuque, T.,
Geisler, S., Kucaba, T., Lacy, M., Le, M., Martin, J., Morris, M.,
Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B.,
Thelings, B., Wylie, T., Lennon, G., Soares, B., Wilson, R. and
Waterston, R.
The WashU-HMNI Mouse EST Project
Unpublished (1996)

TITLE
JOURNAL
COMMENT

CONTACT: Marra M/Mouse EST Project
WashU-HMNI Mouse EST Project
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel.: 314 286 1800
Fax: 314 286 1810
Email: mouseest@wustl.wustl.edu
This clone is available royalty-free through LNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
MG1:342260
Seq primer: -28ml3 rev1 ET from Amersham
High quality sequence stop: 96.
Location/Qualifiers
1. 531
/organism="Mus musculus"
/strain="Inbred CD-1"
/note="Vector: pBluescript SK-; Site_1: EcoRI; Site_2:
XhoI; Cloned unidirectionally. Primer: Oligo dt. Average
insert size: 1.0 kb; Uni-ZAP XR Vector; ~5' adaptor
sequence: 5' GAATTGGCAGACAG 3' ~3' adaptor sequence: 5'
CTGACGATTTTTTTTTTTTTTTT 3'."
/db_xref="taxon:10090"
/clone="567612"
/clone_1id="Stratagene mouse testis (#937308)"
/sex="males"
/dev_stage="10-12 week old"
/lab_host="SOLR (kanamycin resistant)"
<1. >531

BASE COUNT
135 a 138 c 148 g 110 t

ORIGIN
mRNA

every Match 35.3%; Score 365; DB 18; Length 531;
st Local Similarity 88.4%; Pred. No. 0.00e+00;
atches 443; Conservative 0; Mismatches 54; Indels 4; Gaps 4;

D 4 GCGGCTGGC-TCCTGCTCTAGCCCTGCTGCGC-CGGGCGGAGCGCTGAGCTGCC 61
|||||
Q 283 gcgcctgcgcctcctgcctgcctgcgcgcctcttcgcgcgcgcgcgcgcgcctcc 342
|||||

D 62 CCGGTGACCCGCCAAGCAGCGCTTTGCAATGCAGACGTAGTCATGAGCCAAAGCATG 121
|||||
Q 343 ccggtgcacccgcacacagcgctttgcaatgcagctgtagtgcagtcgaagcgctc 402
|||||

D 122 AGCAGAGAGAGGTGGATTCCTGTAATACATCTATGCGAACCCATCAAGAGATTAC 181
|||||
Q 403 agtgcagagagagtgagctcgcgaacacacattatgcgaacctcataagcgatccag 462
|||||

D 182 TATGATGATCAAGCATATTAAGATGTTCAAAAGACCTGACAAAGACATGATGATTATAC 241
|||||
Q 463 tatgatatcaagcagataaagatgctcaaaagcgctgcgaagatatagattatctac 522
|||||

D 242 ACGGCCCTCTTACAGCATGTGCGGGGCTTCGCTGAGCGATTGGAGGAAGAGAGTAT 301
|||||
Q 523 acggccctctctcgagcagtggtggtctcgcgcgcgcttggcggaagagagaatc 582
|||||

D 302 CTAATGACGAGAAAGCGAAGAGAGATGCAAGATGCAATTAACCTCTGTGACTTCATT 361
|||||

OY	583	ctcattggaagaagccggagggggaagcgaaagtgcacatcacccitctgtgacttcac	642
Db	362	GTGCCCTCCGACAGCGTTAAGCGTACCACCAAGAAGATCCTGCAGCACAGGTACCAGATT	421
OY	643	gtgcccttggaccaccttgagcaccaccagaagaagactcgtaaacacaagttaccagatg	702
Db	422	GCGCGTGATGTCAAATAATACGCGTGGCATGATGACTGCTCATCTCTGTTGCC-GGAT	480
OY	703	ggcgcggaggtgcaaatcatcagcgcgtcccacatgatcccgctacatctctccccggac	762
Db	481	GAGTGCCTTC-GGATGAGTAGCG 500	
OY	763	gagtgccctctgtagtgactg 783	
RESULT LOCUS	12 M85579	394 bp mRNA EST	26-MAY-1992
DEFINITION	Esf02095 Homo sapiens cDNA clone HFBCK35 similar to Metalloproteinase Inhibitor.		
ACCESSION NID	M85579		
KEYWORDS SOURCE	9274226 Esf.		
ORGANISM	human clone-HFBCK35 library-Retal brain, Striatogene (cat#936206) vector-LambdaZAP-II primer-M13 Forward 17-18 wk gestation, female oligo-dT + random primed cDNA synthesis; lambdaZAP-II vector, 1.0 average insert size.		
REFERENCE AUTHORS	Homo sapiens Eukaryotes; Metazoa; Eumetazoa; Bilateria; Coelomata; Deuterostomia; Chordata; Vertebrata; Gnathostomata; Osteichthyes Sarcopterygii; Chonmata; Tetrapoda; Amniota; Mammalia; Theria; Eutheria; Archonta; Primates; Catarrhini; Homnidae; Homo. 1 (bases 1 to 394)		
TITLE JOURNAL MEDLINE COMMENT	Adams,M.D., Dupnick,M., Kerlavage,A.R., Moreno,R., Kelley,J.M., Uterback,T.R., Nagle,J.W., Fields,C. and Venter,J.C. Sequence identification of 2,375 human brain genes Nature 355 (6361), 632-634 (1992) 92168112		
FEATURES	Contact: Kerlavage AR The Institute for Genomic Research 932 Clopper Road, Gaithersburg, MD 20878 Tel: 3018699056 Fax: 3018699423 Email: lkerlav@tigr.org. Location/Qualifiers		
SOURCE	1. 394 /organism="Homo sapiens" /clone="HFBCK35"		
mRNA	<1. >394 /gene="D0S272E"		
gene	<1. >394 /gene="D0S272E"		
BASE COUNT ORIGIN	93 a 128 c 99 g 71 t 3 others		
Query Match	34.8%; Score 360; DB 12; Length 394;		
Best Local Similarity	97.7%; Pred. No. 0.00e+00;		
Matches	386; Conservative 0; Mismatches 5; Indels 4; Gaps 4;		
Db	1	ATGCACATCACCTCTGTGTAACCTTCATGCTGCGCTGGAGACACCTTGACACACCCAGAG	60
OY	616	atgacacatcacccctctgtgactcatcgtgcccctgggacacccctgagcacaccagaag	675
Db	61	AAGGCGCTGAACACAGTACGATACGATGGCGCTGGAGAGTGAAGATCAACGGCGTCCCATG	120
OY	676	aagsgctggaaccacaggtaccaaagtgcgcgagtgcaaatcaacycgtccccatg	735
Db	121	ATCCCGTGCCTACATCTCTCCCCGAGAGAGTCTGGATGTGACTGGGTACAGAGAAG	180
OY	736	atcccggtacacatctctctcccggaagagtgcctctgtgagtgaactggtccaagaag	795
Db	181	AACATCAAAGGGACCAAGCCAAAGTTCTTCCTGCATCAAGAAAGTACGGCTCTCTGT	240

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 QY 796 aacatcaagcgccaccagagcccaagttcttcgctcgtacccaagaagaagcgagccctcgt 855
 Db 241 GCGTGTACCCGCGGGC-GNCGCCGCCCAAGAGGATTCTCGACATCGAGAGCAACCATAA 299
 OY 856 gcgtgtacccgagcgagcgagccccaagaagagttcttcgacatcagagaccataa 915
 Db 300 GCAGGCTTCACAGCCCTTTGGCCACTTGCAGAAAAAGCTCCAGGGTTTCAGCTTG 359
 QY 916 gcagcgccccaagcgcctgtgccaact-gcaaaaaagcctccaagaggttctgact-g 973
 Db 360 GTCCAGCTCTGACATCCCTCTCTGGAAAAAGCAGCAT 394
 OY 974 gtcagcctgacacccctcctcg-aaacagcat 1007

RESULT 13
 LOCUS AA627637 386 bp mRNA EST 16-OCT-1997

DEFINITION ng51c01.s1 NCI-CGAP Co10 Homo sapiens cDNA clone IMAGE:1147392
 similar to gb:S48568 TISSUE INHIBITOR OF METALLOPROTEINASES II
 PRECURSOR (HUMAN);

ACCESSION AA627637
 MID G2539732

KEYWORDS EST.
 SOURCE human.

ORGANISM

Homo sapiens
 Eukaryota; Metazoa; Chordata; Vertebrata; Mammalia; Eutheria;
 Primates; Catarrhini; Hominoidea; Homo.

REFERENCE 1 (bases 1 to 386)
 NCI-CGAP <http://www.ncbi.nlm.nih.gov/ncicgap>.
 National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
 Tumor Gene Index
 Unpublished (1997)

JOURNAL COMMENT

Contact: Robert Strausberg, Ph.D.
 Tel: (301) 496-1550
 Email: Robert.Strausberg@nih.gov
 Tissue Procurement: Ilan Kirsch, M.D., Michael R. Emmert-Buck,
 M.D., Ph.D.

cDNA Library Preparation: M. Bento Soares, Ph.D.

cDNA Library Arrayed by: Greg Lennon, Ph.D.
 DNA Sequencing by: Washington University Genome Sequencing Center
 Clone distribution: NCI-CGAP clone distribution information can be
 found through the I.M.A.G.E. Consortium/ILNI at:
www-bio.lnl.gov/db/rp/image/image.html

Trace considered overall poor quality
 Seq primer: -40m13 fwd. ET from Amersham
 High quality sequence stop: 1.
 Location/Qualifiers

FEATURES

1..386
 /organism="Homo sapiens"
 /note="Organ: colon; Vector: p7773D-Pac (Pharmacia) with a
 modified polylinker; 1st strand cDNA was prepared from
 RER+ colon tumor, and was then primed with a Not I -
 oligo(dT) primer. Double-stranded cDNA was ligated to Eco
 RI adaptors (Pharmacia), digested with Not I and cloned
 into the Not I and Eco RI sites of the modified p7773
 vector. Library is normalized. Library was constructed by
 Bento Soares and M. Fatima Boudado (N-Soares4)."
 /db_xref="taxon:9606"
 /clone_image="1147392"
 /clone_lib="NCI-CGAP Co10"
 /tissue_type="colon tumor RER+"
 /lab_host="DH10B"
 /lab_host="DH10B"

BASE COUNT 65 a 96 c 127 g 98 t

ORIGIN

Query Match 33 53; Score 346; DB 28; Length 386;
 Best Local Similarity 96.83; Pwd. NO. 0.00e+00;
 Matches 363; Conservative 0; Mismatches 11; Indels 1; Gaps 1;

Db 13 GGGATGAGCTTTATTCATGCTTTCCAGGAGGATGTCAGAGCTGACCACTGCA 72
 Cp 1035 gggatgagctttatcattcattcgttccaggaagggatcagacgagcagaa 966
 Db 73 ACCCTTGAGGCTTTTTCAGTGTGCGCCAGAGGCGCTTGAGGAGCTCTTATGGTCC 132
 Cp 965 acccttgagagcttttttgcagttgagccagagggcgttggagcctgtatggtcc 906
 Db 133 TCGATGTCAGAAACTCTGCTGGGGGGCGCGCGCGGTGACACACGACAGAGCCG 192
 Cp 905 tcgatgtcagaactcctctgtggggcgcgcgccggttacacagcacagagagccg 846
 Db 193 TCACCTTCTTATGACGAGCGCAAGAACTGGCTGTGGCGCTTATGTTCTTCTGTG 252
 Cp 845 tcactctctgtatcagagcgaggaactggtcctgtgctgtatgtctctctctgtg 786
 Db 253 ACCCAGTCCATCAGAGGACATCTGTCGGGGGAGGAGATATACAGGAGTCACTGAGGCGAG 312
 Cp 785 acccagtcattccagagagactcgtccggggagagatgacagagagatcagggcag 726
 Db 313 C-CGTGATCTTGACTCGAGCCCATCTGATCTGTGGGTGAGGCTCTTCTTGCGGTG 371
 Cp 725 cggatgactctgactcgcagcccatctgtacctgtgttcaaggctctctctggtg 666
 Db 372 GTGCTCAGGGGTCTCC 386
 Cp 665 gtcctcaggggtctcc 651

RESULT 14
 LOCUS AA62734 429 bp mRNA EST 10-JUN-1997

DEFINITION v91a09.r1 Soares mouse mammary gland NMIMG Mus musculus cDNA clone
 851128 5' similar to gb:X62622 M.musculus TIMP-2 mRNA for tissue
 inhibitor of metalloproteinases, (MOUSE);

ACCESSION AA62734
 MID 92187625

KEYWORDS

SOURCE

ORGANISM

house mouse.
 Mus musculus
 Eukaryota; mitochondria eukaryotes; Metazoa; Chordata;
 Vertebrata; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae;

REFERENCE 1 (bases 1 to 429)
 Murinae: Mus.
 Marra, M., Hillier, L., Allen, M., Bowles, M., Dietrich, N., Dubuque, T.,
 Geisler, S., Kucaba, T., Lacy, M., Le, M., Martin, J., Morris, M.,
 Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B.,
 Theising, B., Wylie, T., Lennon, G., Soares, B., Wilson, R. and
 Waterston, R.

The WashU-HMI Mouse EST Project
 Unpublished (1996)

JOURNAL COMMENT

Contact: Marra M/Mouse EST Project
 WashU-HMI Mouse EST Project
 Washington University School of Medicine
 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
 Tel: 314 286 1800
 Fax: 314 286 1810
 Email: mouseest@wustl.edu
 This clone is available royalty-free through ILNI; contact the
 IMAGE Consortium (info@image.llnl.gov) for further information.
 MGI:503280
 Seq primer: -28m13 rev2 ET from Amersham
 High quality sequence stop: 369.
 Location/Qualifiers

FEATURES

source

1..429
 /organism="Mus musculus"
 /strain="C57BL/6J"
 /note="Vector: p7773D-Pac (Pharmacia) with a modified
 polylinker; Site 1: Not I; Site 2: Eco RI; 1st strand cDNA
 was primed with a Not I - oligo(dT) primer 15'
 TGTTCACATCTGAGGTGAGGAGCGGCGCGAGATGTTTCTTTTCTTTTCTTTT
 T 3'; double-stranded cDNA was ligated to Eco RI

Search completed: Mon May 4 14:42:31 1998
Job time : 1732 secs.

 W07954 (TM)

Release 3.0.5AA John F. Collins, Biocomputing Research Unit.
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 Distribution rights by Oxford Molecular Ltd

Mon May 4 14:49:00 1998; MasPar time 9.43 Seconds
 348.668 Million cell updates/sec
 Msearch - protein database search, using Smith-Waterman algorithm
 on: Mon May 4 14:49:00 1998; MasPar time 9.43 Seconds
 ular output not generated.

Title: >R07954
 Description: (1-220) from a-geneseq.pep
 Perfect Score: 1651
 Sequence: 1 mgaarsipiafcilllgtl.....cwygaapqkqefidiedp 220

Scoring table:
 Gap 11
 PAM 150

Searched: 120837 seqs, 14945562 residues

Post-processing: Minimum Match 0%
 Listing first 45 summaries

Database: a-geneseq31
 1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
 8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
 14:part14 15:part15 16:part16 17:part17 18:part18
 19:part19 20:part20 21:part21 22:part22 23:part23
 24:part24 25:part25 26:part26

Statistics: Mean 31.999; Variance 118.552; scale 0.270

Pred. No. is the number of results predicted by chance to have a
 score greater than or equal to the score of the result being printed,
 and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Match	Length	DB	ID	Description	Pred. No.
1	1651	100.0	220	12	R62768	Bovine metalloproteinase	3.28e-173
2	1651	100.0	220	2	R07954	Bovine metalloproteinase	3.28e-173
3	1550	93.9	220	12	R62769	Human metalloproteinase	1.40e-161
4	1550	93.9	220	13	R65009	Human metalloproteinase	1.40e-161
5	1550	93.9	220	2	R07955	Human metalloproteinase	1.40e-161
6	1416	85.8	194	2	R06896	Complete sequence of	3.58e-146
7	1339	82.7	186	2	R06895	Part of TIMP-2 metalloproteinase	2.49e-137
8	1339	81.1	192	2	R06897	Part of TIMP-2 metalloproteinase	2.49e-137
9	1301	78.8	177	2	R06897	Part of TIMP-2 metalloproteinase	2.49e-137
10	817	49.5	224	23	R25603	Tissue inhibitor of metalloproteinase	8.97e-78
11	815	49.4	224	18	R98265	Tissue inhibitor of metalloproteinase	8.97e-78
12	702	42.5	211	25	R30310	Human TIMP-1/TIMP-3	8.56e-65
13	681	41.2	198	15	R84216	HUMAN TIMP-3 clone-2 product	1.97e-62
14	681	41.2	206	13	R65014	Human tissue inhibitor	1.97e-62
15	681	41.2	211	15	R84215	TIMP-3 clone-7 product	1.97e-62
16	681	41.2	211	13	R72598	TIMP-3 metalloproteinase	1.97e-62
17	680	41.2	212	13	R35002	Chicken tissue inhibitor	2.35e-62
18	668	40.5	188	25	R30308	Human TIMP-3	5.68e-61
19	669	40.5	211	13	R65001	Mouse tissue inhibitor	4.39e-61

RESULT ID	Score	Match	Length	DB	ID	Description	Pred. No.
20	631	38.2	184	13	R65000	Chicken inhibitor of TIMP-3	8.01e-57
21	543	32.9	164	15	R84217	TIMP-3 HCM-3 clone pr	5.30e-47
22	513	31.1	206	13	R65006	Rabbit tissue inhibit	1.13e-43
23	512	31.0	207	13	R65003	Cattle tissue inhibit	1.46e-43
24	511	31.0	207	3	P60592	Sequence of a human p	1.89e-43
25	511	31.0	207	25	R30309	Human TIMP-1	1.89e-43
26	511	31.0	207	3	P60786	Sequence of tissue in	1.89e-43
27	511	31.0	207	3	P60775	Sequence of human nat	1.89e-43
28	510	30.9	205	13	R65007	Mouse tissue inhibit	2.43e-43
29	506	30.6	207	3	P60593	Sequence of a gibbon	6.75e-43
30	493	29.9	207	13	R65005	Human tissue inhibit	1.85e-41
31	475	28.8	207	13	R65004	Pig tissue inhibitor	1.80e-39
32	463	28.0	207	13	R65008	Mouse tissue inhibit	3.78e-38
33	439	18.7	48	2	R06749	Peptide #1 for detect	2.01e-21
34	219	13.3	28	9	R47010	Metalloproteinase inh	5.35e-12
35	167	10.1	24	2	R06894	Peptide #3 for detect	8.79e-07
36	157	9.5	19	9	R47011	Metalloproteinase inh	8.26e-06
37	149	9.0	47	3	P60276	N-terminal sequence o	4.85e-05
38	144	8.7	22	2	R10001	Immunogenic TIMP-2 pe	1.45e-04
39	140	8.5	18	2	R06747	Tryptic digestion pro	3.47e-04
40	134	8.1	18	13	R10002	Tissue inhibitor of m	1.27e-03
41	133	8.1	18	13	R65011	Immunogenic TIMP-2 pe	1.57e-03
42	130	7.9	16	2	R06748	Tryptic digestion pro	2.98e-03
43	128	7.8	15	2	R10003	Peptide #2 for detect	4.57e-03
44	128	7.8	23	2	R06750	N-terminal of monocy	3.03e-02
45	119	7.2	20	6	R31183		

ALIGNMENTS

RESULT 1
 ID R62768 standard; Protein; 220 AA.
 AC R62768;
 DT 13-JUL-1995 (first entry)
 DE Bovine metalloproteinase inhibitor.
 KW Metalloproteinase inhibitor; tumour cell dissemination;
 KW rheumatoid arthritis; dystrophic epidermolysis bullosa;
 KW emphysema; osteoporosis; MI gene disorders.
 OS Bos taurus.
 FH Key location/Qualifiers
 FT peptide 1..26
 PN EP-623676-A.
 PD 09-NOV-1994.
 PE 18-MAY-1990; 305433.
 PR 19-MAY-1989; US-355027.
 PR 29-MAR-1990; US-501904.
 PA (AMGE-) AMGEN INC.
 PI (CHIL-) CHILDRENS HOSPITAL LOS ANGELES.
 PI Boone TC, Declerck VA, Langley KE;
 DR WPI: 94-343309/43.
 DR N-PSDB: 073087.
 PT New metalloproteinase inhibitor, analogues and DNA - for
 PT treating tumour cell dissemination, rheumatoid arthritis and for
 PT large-scale recombinant inhibitor prodn.
 PS Claim 12; Fig 1; 65pp; English.
 CC G73087 encodes R62768 bovine metalloproteinase inhibitor (MI), it
 CC may be used to inhibit tumour cell dissemination and for treating
 CC rheumatoid arthritis, dystrophic epidermolysis bullosa, emphysema
 CC and osteoporosis. The DNA may be used to detect MI gene disorders.
 SQ Sequence 220 AA;

Query Match 100.0%; Score 1651; DB 12; Length 220;
 Best Local Similarity 100.0%; Pred. No. 3.28e-173;
 Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

DB	1	mgaarsipiafcilllgtllpradacspvhpqgafcnadivlrakavnkkevdsnd	60
Qy	1	mgaarsipiafcilllgtllpradacspvhpqgafcnadivlrakavnkkevdsnd	60
Db	61	lygnpikrigrqelqkqkmgfpgddiefityrapaavcysldigykkeyltaagkaeng	120
Qy	61	lygnpikrigrqelqkqkmgfpgddiefityrapaavcysldigykkeyltaagkaeng	120

Db 121 nmhtlctdflvptwtlsatqkxslnhrygmgecklttrcpmipcyisspdeclmndwvte 180
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 QY 121 nmhtlctdflvptwtlsatqkxslnhrygmgecklttrcpmipcyisspdeclmndwvte 180
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 Db 181 knlnghqakffactkrsdgscawyrqgaapkgelidiedp 220
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 QY 181 knlnghqakffactkrsdgscawyrqgaapkgelidiedp 220
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RESULT 2

ID R07954 standard; protein; 220 AA.
 AC R07954;
 DT 21-FEB-1991 (first entry)
 DE Bovine metalloproteinase inhibitor gene product.
 KM Tumour; chemotherapy; cancer; Paget's disease; osteoporosis;
 OS scleroderma; cholesteatoma.
 FS Bos taurus.
 FH Key

Location/Qualifiers
 protein 27..220

EP-398753-A.
 22-NOV-1990.
 PF 18-MAY-1990; 305433.
 PR 19-MAY-1989; US-355027.
 PR 29-MAR-1990; US-501904.
 PA (AMGE-) AMGEN INC.
 PA (CHIL-) CHILDREN'S HOSPITAL OF LA.
 PI Langley KE, Boone TC, Declerck YA;
 DR WPI-94-34309/43.
 DR N-PSDB; Q073088.
 PT New metallo-proteinase inhibitor polypeptide(s) - and DNA
 PT encoding them, for treatment of tumour cell dissemination and
 PT rheumatoid arthritis
 PS Claim 12; Fig 1; 63pp; English.
 CC The product has therapeutic use in inhibiting tumour dissemination
 CC during chemotherapy and radiation therapy, impurged bone marrow cell
 CC harvesting etc. The inhibitor may also be useful in encapsulating
 CC tumours aiding clean excision, and in treatment of emphysema, Paget's
 CC disease, osteoporosis, scleroderma and bedsores.
 CC The gene product also has application in autoimmune disorders eg.
 CC Rheumatoid arthritis and multiple sclerosis.
 CC See also Q06584.
 SQ Sequence 220 AA;

Query Match 100.0%; Score 1651; DB 2; Length 220;
 Best Local Similarity 100.0%; Pred. No. 3.28e-173;
 Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 mgsaarslplafcllllglpradacscspvhpqgafcnadivtrakavnkkevsgnd 60
 |||||||
 QY 1 mgsaarslplafcllllglpradacscspvhpqgafcnadivtrakavnkkevsgnd 60
 |||||||
 Db 61 iynpnkrlryelkqlkmkqkpgdqdeflytapaaavcgsldigqkkeyllagkaegnd 120
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 QY 61 iynpnkrlryelkqlkmkqkpgdqdeflytapaaavcgsldigqkkeyllagkaegnd 120
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 Db 121 nmhtlctdflvptwtlsatqkxslnhrygmgecklttrcpmipcyisspdeclmndwvte 180
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 QY 121 nmhtlctdflvptwtlsatqkxslnhrygmgecklttrcpmipcyisspdeclmndwvte 180
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 Db 181 knlnghqakffactkrsdgscawyrqgaapkgelidiedp 220
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 QY 181 knlnghqakffactkrsdgscawyrqgaapkgelidiedp 220
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RESULT 3

ID R62769 standard; Protein; 220 AA.
 AC R62769;
 DT 13-JUL-1995 (first entry)
 DE Human metalloproteinase inhibitor.
 KM Metalloproteinase inhibitor; tumour cell dissemination;
 KW rheumatoid arthritis; dystrophic epidermolysis bullosa;
 KW emphysema; osteoporosis; MI gene disorders.

OS Homo sapiens.
 FH Key
 FT peptide
 FT /label= sig_peptide

EP-623676-A.
 PD 09-NOV-1994.
 PF 18-MAY-1990; 305433.
 PR 19-MAY-1989; US-355027.
 PR 29-MAR-1990; US-501904.
 PA (AMGE-) AMGEN INC.
 PA (CHIL-) CHILDREN'S HOSPITAL LOS ANGELES.
 PI Boone TC, Declerck YA, Langley KE;
 DR WPI; 94-34309/43.
 DR N-PSDB; Q073088.
 PT New metallo-proteinase inhibitor, analogues and DNA - for
 PT treating tumour cell dissemination, rheumatoid arthritis and for
 PT large-scale recombinant inhibitor prodn.
 PS Claim 8; Fig 2; 65pp; English.
 CC Q73088 encodes R62769 human metalloproteinase inhibitor (MI). It
 CC may be used to inhibit tumour cell dissemination and for treating
 CC rheumatoid arthritis, dystrophic epidermolysis bullosa, emphysema
 CC and osteoporosis. The DNA may be used to detect MI gene disorders.
 SQ Sequence 220 AA.

Query Match 93.9%; Score 1550; DB 12; Length 220;
 Best Local Similarity 91.8%; Pred. No. 1.40e-161;
 Matches 202; Conservative 12; Mismatches 6; Indels 0; Gaps 0;

Db 1 mgsaattlhalgllllallpradacscspvhpqgafcnadivtrakavnkkevsgnd 60
 |||||||
 QY 1 mgsaarslplafcllllglpradacscspvhpqgafcnadivtrakavnkkevsgnd 60
 |||||||
 Db 61 iynpnkrlryelkqlkmkqkpgdqdeflytapaaavcgsldigqkkeyllagkaegnd 120
 |||||||
 QY 61 iynpnkrlryelkqlkmkqkpgdqdeflytapaaavcgsldigqkkeyllagkaegnd 120
 |||||||
 Db 121 nmhtlctdflvptwtlsatqkxslnhrygmgecklttrcpmipcyisspdeclmndwvte 180
 |||||||
 QY 121 nmhtlctdflvptwtlsatqkxslnhrygmgecklttrcpmipcyisspdeclmndwvte 180
 |||||||
 Db 181 knlnghqakffactkrsdgscawyrqgaapkgelidiedp 220
 |||||||
 QY 181 knlnghqakffactkrsdgscawyrqgaapkgelidiedp 220
 |||||||

RESULT 4

ID R65009 standard; Protein; 220 AA.

DT 24-OCT-1995 (first entry)
 DE Human tissue inhibitor of metalloproteinase (TIMP-2).
 KM Tissue inhibitor of metalloproteinase; diagnostic; therapeutic;
 KW prophylaxis.
 OS Homo sapiens.
 PN M09505478-A.
 PD 23-FEB-1995.
 PF 12-AUG-1994; U09188.
 PR 12-AUG-1993; US-105263.
 PR 13-DEC-1993; US-167463.
 PA (REGC) UNIV CALIFORNIA.
 PI Hawkes SP, Kishnani NS, Yang T;
 DR WPI; 95-098775/13.
 PT New human tissue inhibitor of metallo-proteinase-3 - used to
 PT develop prods. for diagnosis, therapy or prophylaxis of
 PT conditions with unwanted matrix metallo-proteinase activity.
 PS Disclosure; Fig 6A-B; 87pp; English.
 CC The protein sequence of human TIMP-2 is compared with the cattle,
 CC pig, human, rabbit and mouse TIMP-1, mouse and cattle TIMP-2, and
 CC chicken (Ch) and mouse TIMP-3. A probe based on the CHIMP-3
 CC amino acid sequence (R65000) is used to isolate DNA encoding
 CC human TIMP-3 from a human cDNA library. Human TIMP-3 can be used
 CC for the diagnosis, therapy or prophylaxis of conditions
 CC characterized by excess or unwanted matrix metalloproteinase
 CC activity, e.g. neoplasias, tumor metastasis, inflammatory

OY 104 19gkkeyllagkaegnmhltlclclvfwltsatqkkslnhrygmgeckltcrpmip 163
DB 121 cyispedclmwdvteknngqakffacktrsgscawyrgaapbkqefidiedp 177
OY 164 cyispedclmwdvteknngqakffacktrsgscawyrgaapbkqefidiedp 220

RESULT 10

ID W25603 standard; Protein; 224 AA.
AC W25603;
DT 03-NOV-1997 (first entry)
DE Tissue inhibitor of metalloproteinase, TIMP-4.
KW Tissue inhibitor of metalloproteinase; TIMP-4; Inocyte Clone No. 589345;
KW metalloproteinase; tumour metastasis; angiogenesis; growth; osteoarthritis;
KW osteoporosis; pulmonary emphysema; periodontal disease; diabetic ulcer;
KW rheumatoid arthritis; contraception; gene therapy; corneal ulcer.
OS Homo sapiens.
FH Key Location/Qualifiers
FT peptide 1..29
FT protein /note- "Signal peptide"
FT /note- "Mature TIMP-4"
FT domain 47..51
FT /note- "Domain characteristic of TIMPs"

FT US5643752-A.
FN 01-JUL-1997.
PD 18-JAN-1996; 588163.
PR 18-JAN-1996; US-588163.
PA (INCYTE) INCYTE PHARM INC.
PI Hawkins PR, Murry LE;
DR WPI: 97-350238/32.
N-PSDB: T80986.
PT DNA encoding a tissue inhibitor of metalloproteinase(s), TIMP-4 -
PT for production of recombinant protein for treating tumours,
PT arthritis, etc., and for contraception
PS Claim 1; Fig 1; 24pp; English.
CC This sequence is a tissue inhibitor of metalloproteinases designated
CC TIMP-4. The cDNA clone was identified with Inocyte Clone No. 589345.
CC TIMP-4 can be used to treat disorders associated with excessive
CC metalloproteinase expression, e.g. tumour metastasis, angiogenesis and
CC growth, osteoarthritis, osteoporosis, pulmonary emphysema, periodontal
CC disease and rheumatoid arthritis, and for contraception. TIMP-4 cDNA
CC can be used for gene therapy of such disorders and in diagnostic assays
CC for TIMP-4 mRNA in cells and tissues. Oligonucleotide fragments of the
CC TIMP-4 cDNA and antagonists or inhibitors of TIMP-4 can be used to treat
CC disorders associated with over-expression of TIMP-4, e.g. to promote
CC healing of corneal and diabetic ulcers and ulcers/lesions caused by
CC microorganisms. Antibodies to TIMP-4 can be used to diagnose such
CC ulcers or lesions.
Sequence 224 AA;

Query Match 49.5%; Score 817; DB 23; Length 224;
Best Local Similarity 45.1%; Pred. No. 8.97e-78;
Matches 102; Conservative 59; Mismatches 57; Indels 8; Gaps 6;
DB 1 mpsgrprrap-swvlllrlallrppglgeacscapahpqhichsalvtrkissekxvp 59
OY 1 mgsaarslplacilil-igtlil-pra--daccspvhpqafcnadivtrkavnkkev 56
DB 60 asadp-adetkmlryelqikmfkgfekvdylytpdfdsalcgkkleansqkyllyt 118
OY 57 sgndlygnpikrlyqelqikmfkgfekvdylytpdfdsalcgkkleansqkyllyt 114
DB 119 gvlsgdkvflnclnylwpedsilvqreslnhynhincgqtlctcytpctlsapneclw 178
OY 115 kaegngnmhltclclvfwltsatqkkslnhrygmgeckltcrpmipcyisspdeclw 174
DB 179 tdwllerklylgyqahyvmkhdvgtcsvyryghlplrkfefdivp 224
OY 175 mdvteknngqakffacktrsgscawyrgaapbkqefidiedp 220

RESULT 11

ID R98265 standard; Protein; 224 AA.
AC R98265;
DT 09-OCT-1996 (first entry)
DE Tissue inhibitor of metalloproteinase-4 (TIMP-4).
KW Tissue inhibitor of metalloproteinase-4; TIMP-4; cancer; arthritis;
KW bone resorption; Paget disease; hyperparathyroidism;
KW cholesteatoma; therapy.
OS Homo sapiens.
FH Key Location/Qualifiers
FT peptide 1..29
FT /label- sig_peptide
FT protein 30..224
FT /label- Mat_protein
FN W09618725-A1.
PD 20-JUN-1996.
PR 13-DEC-1994; U14498.
PR 13-DEC-1994; WO-014498.
PA (HUMA-) HUMAN GENOME SCI INC.
PI Greene JM, Rosen CA;
DR WPI: 96-300644/30.
N-PSDB: T34433.
PT DNA encoding human tissue inhibitor of metalloproteinase-4 (TIMP-4)
PT - useful to treat, e.g. cancer, arthritic diseases, bone resorption
PT diseases, etc.
PS Claim 14; Fig 1; 49pp; English.
CC Human tissue inhibitor of metalloproteinase-4 (TIMP-4) (R98265)
CC is a novel member of the TIMP family. Its amino acid sequence was
CC deduced from a cDNA clone (T34433) obtd. from an early stage
CC human brain. The sequence shows 48% identity to human TIMP-2.
CC Recombinant TIMP-4 can be expressed in e.g. E. coli, COS or insect
CC cell hosts. It can be used to treat patients in need of TIMP-4
CC (e.g. cancer, arthritic diseases, bone resorption diseases, Paget's
CC disease, hyperparathyroidism and cholesteatoma), and to screen for
CC antagonists useful for treating patients in need of TIMP-4 inhibition
CC (e.g. for tissue repair and remodeling). It can also be used in
CC diagnostic processes.
SQ Sequence 224 AA;

Query Match 49.4%; Score 815; DB 18; Length 224;
Best Local Similarity 45.1%; Pred. No. 1.51e-77;
Matches 102; Conservative 58; Mismatches 58; Indels 8; Gaps 6;
DB 1 mpsgrprrap-swvlllrlallrppglgeacscapahpqhichsalvtrkissekxvp 59
OY 1 mgsaarslplacilil-igtlil-pra--daccspvhpqafcnadivtrkavnkkev 56
DB 60 asadp-adetkmlryelqikmfkgfekvdylytpdfdsalcgkkleansqkyllyt 118
OY 57 sgndlygnpikrlyqelqikmfkgfekvdylytpdfdsalcgkkleansqkyllyt 114
DB 119 gvlsgdkvflnclnylwpedsilvqreslnhynhincgqtlctcytpctlsapneclw 178
OY 115 kaegngnmhltclclvfwltsatqkkslnhrygmgeckltcrpmipcyisspdeclw 174
DB 179 tdwllerklylgyqahyvmkhdvgtcsvyryghlplrkfefdivp 224
OY 175 mdvteknngqakffacktrsgscawyrgaapbkqefidiedp 220

RESULT 12
ID W30310 standard; Protein; 211 AA.
AC W30310;
DT 29-JAN-1998 (first entry)
DE Human TIMP-1/TIMP-3 fusion protein.
KW TIMP-3; human; antibody; TIMP-3-mediated disease; malignant tumour cell;
KW cancer progression; TIMP-1.
OS Homo sapiens.
FH Key Location/Qualifiers
FT key 1..23
FT /note- "TIMP-1 fragment"
FT /note- "TIMP-3 fragment"
FT Misc-difference 24..211
FN J09235300-A.

RESULT 15

ID R84215 standard; Protein; 211 AA.

AC R84215;

DT 29-FEB-1996 (first entry)

DE TIMP-3 clone-7 product.

KW TIMP-3; tissue inhibitor metalloproteinase type three; cancer;

KW inflammation; emphysema; embryo implant modulation; arthritis;

KW dystrophic epidermolysis bullosa; periodontal disease; ulcer;

KW scleroderma; vulnery.

OS Homo sapiens.

FH Key Location/Qualifiers

FT peptide 1..23

FT modified_site 184..186

FT /label- N-glycosylation_site

PN W09509918-A1.

PD 13-APR-1995.

PF 04-OCT-1994; U11241.

PR 06-OCT-1993; US-134231.

(AMGE-) AMGEN INC.

Koski RA, Silbiger SM;

WPI; 95-155259/20.

N-PSDB; T02359.

PT New tissue inhibitor metalloproteinase type three - for treating

PT cancer, inflammation, emphysema, embryo implant modulation, nerve

PT cell disorders, etc.

PS Claim 3; Page 66-67; 112pp; English.

CC The product (R84215) of Timp3clone7 cDNA clone (T02359) is a novel

CC tissue inhibitor metalloproteinase, designated TIMP-3. Recombinant

CC TIMP-3 can be expressed in prokaryotic or eukaryotic host cells

CC and used to treat degradative diseases of connective tissues.

SO Sequence 211 AA;

Query Match 41.2%; Score 681; DB 15; Length 211;

Best Local Similarity 43.7%; Pred. No. 1,97e-62;

Matches 87; Conservative 51; Mismatches 51; Indels 10; Gaps 8;

Db 21 aeactcspshpdaefncsdvtrakvvgkklvkegp--fgt-l--v-ytlkqmkmyrgft 74

QY 24 adacscspvhpqdaefncsdvtrakvvgkklvkegp--fgt-l--v-ytlkqmkmyrgft 82

Db 75 kmphvgyhtaseselcgklleevn-kyqyllgrvy-dgkmtyglcnfverwdqtltsgr 132

QY 83 d-qdletfytapaavcvsldlgkkeyltagkaegnghmltldclivpwtllsatqk 141

Db 133 kglmyryhlgcncklkscyylpcftsknecltmdlnsfyPygyskhyactlrqkygc 192

QY 142 kslmhrygmgecklttrpmmpcylsspedclmawvteknlnghnqaktfacktrsdgsc 201

193 swyrgwppdkslinatdp 211

QY 202 awyrgaappkgefldiedp 220

Search completed: Mon May 4 14:49:28 1998
Job time : 28 secs.

 W P O S E R I E
 (TM)

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MSrch_PP protein - protein database search, using Smith-Waterman algorithm
 Mon May 4 14:46:56 1998: MasPar time 8.66 Seconds
 637.128 Million cell updates/sec
 Output not generated.

Title: >R07954
 Description: (1-220) from a-geneseq.pep
 Perfect Score: 1651
 Sequence: 1 mgsaarslplafcllllgtl.....cavyrgaappkgefldedp 220
 Scoring table: PAM 150
 Gap 11
 Searched: 69112 seqs, 25083644 residues
 Post-processing: Minimum Match 0%
 Listing first 45 summaries

Database: swiss-prot35
 1:swiss1

Statistics: Mean 44.292; Variance 65.300; scale 0.678
 Pred. No. is the number of results predicted by chance to have a
 score greater than or equal to the score of the result being printed,
 and is derived by analysis of the total score distribution.

SUMMARIES

ult	Score	Query	Length	ID	Description	Pred. No.
1	1651	100.0	220	1	TIM2_BOVIN	METALLOPROTEINASE INHI 0.00e+00
2	1550	93.9	220	1	TIM2_HUMAN	METALLOPROTEINASE INHI 0.00e+00
3	1546	93.6	220	1	TIM2_RAT	METALLOPROTEINASE INHI 0.00e+00
4	1536	93.0	220	1	TIM2_MOUSE	METALLOPROTEINASE INHI 0.00e+00
5	661	41.2	211	1	TIM3_HUMAN	METALLOPROTEINASE INHI 4.35e-150
6	660	41.2	212	1	TIM3_CHICK	METALLOPROTEINASE INHI 8.22e-150
7	672	40.7	211	1	TIM3_BOVIN	METALLOPROTEINASE INHI 1.33e-147
8	672	40.7	211	1	TIM3_MOUSE	METALLOPROTEINASE INHI 1.33e-147
9	666	40.3	211	1	TIM3_RAT	METALLOPROTEINASE INHI 5.98e-146
10	512	31.0	207	1	TIM1_BOVIN	METALLOPROTEINASE INHI 6.82e-104
11	511	31.0	207	1	TIM1_PAPY	METALLOPROTEINASE INHI 1.27e-103
12	511	31.0	207	1	TIM1_HUMAN	METALLOPROTEINASE INHI 1.27e-103
13	508	30.8	206	1	TIM1_RABIT	METALLOPROTEINASE INHI 8.19e-103
14	504	30.5	205	1	TIM1_SHEEP	METALLOPROTEINASE INHI 8.19e-103
15	504	30.5	205	1	TIM1_MOUSE	METALLOPROTEINASE INHI 9.83e-102
16	503	30.5	217	1	TIM1_RAT	METALLOPROTEINASE INHI 1.83e-101
17	485	29.4	207	1	TIM1_PTG	METALLOPROTEINASE INHI 1.28e-96
18	103	6.2	1025	1	YBD7_YEAST	ALPHA-ADAPTIN HOMOLOG 1.89e-03
19	100	6.1	267	1	YATR_BACFI	HYPOTHETICAL ABC TRANS 6.27e-03
20	90	5.5	1058	1	POL3_XENLA	RETROVIRUS-RELATED POL 2.81e-01
21	89	5.4	998	1	POL_XENLA	POLY (ADP-RIBOSE) POLY 4.03e-01
22	89	5.4	1011	1	POL_CHICK	POLY (ADP-RIBOSE) POLY 4.03e-01
23	89	5.4	1013	1	POL_HUMAN	POLY (ADP-RIBOSE) POLY 4.03e-01

RESULT	ID	TIM2_BOVIN	STANDARD	PRT	220 AA
24	89	5.4	1123	1	ABL_MOUSE
25	89	5.4	1130	1	ABL_HUMAN
26	87	5.3	245	1	LUXP_VIBHA
27	88	5.3	290	1	LUXP_PRECUSOR
28	87	5.3	1015	1	HYPR_ECOLI
29	86	5.2	200	1	PROL_BOVIN
30	85	5.1	155	1	REP2_ZYGE
31	84	5.1	208	1	ECR_RAT
32	85	5.1	428	1	IPGB_SHIDY
33	85	5.1	441	1	YOBX_MYCTU
34	85	5.1	436	1	NODC_RHILP
35	84	5.1	492	1	YRS4_CAEEL
36	84	5.1	507	1	CPBC_RAT
37	85	5.1	519	1	INO1_CITPA
38	84	5.1	700	1	DHA7_YEAST
39	84	5.1	904	1	NUOL_RHOCA
40	85	5.1	1059	1	SP97_HUMAN
41	83	5.0	264	1	POL2_DROME
42	83	5.0	399	1	TRPA_STN3
43	83	5.0	435	1	DNAB_STRCO
44	83	5.0	763	1	HEFL_HAEIN
45	83	5.0	898	1	YH27_YEAST

ALIGNMENTS

RESULT	ID	TIM2_BOVIN	STANDARD	PRT	220 AA
AC	P16368	01-AUG-1990 (REL. 15, CREATED)			
AD	01-MAY-1991 (REL. 18, LAST SEQUENCE UPDATE)				
DE	01-FEB-1995 (REL. 31, LAST ANNOTATION UPDATE)				
DE	METALLOPROTEINASE INHIBITOR 2 PRECURSOR (TIMP-2) (TISSUE INHIBITOR OF				
GN	TIMP2.				
OS	BOS TAURUS (BOVINE).				
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;				
OC	EUTHERIA; ARTIODACTYLA.				
RN	[1]				
RP	SEQUENCE FROM N.A.				
RX	MEDLINE: 90207285.				
RA	BOONE T.C., JOHNSON M.J., DE CLERCK Y.A., LANGLEY K.E.;				
RL	PROC. NATL. ACAD. SCI. U.S.A. 87:2800-2804(1990).				
RN	[2]				
RP	SEQUENCE OF 27-71.				
RC	TISSUE-CARTILAGE.				
RX	MEDLINE: 86140235.				
RA	MURRAY J.B., ALLISON K., SUDHALTER J., LANGER R.;				
RL	J. BIOL. CHEM. 261:4154-4159(1986).				
RN	[3]				
RP	SEQUENCE OF 27-71.				
RX	MEDLINE: 9008914.				
RA	DE CLERCK Y.A., YEAN T.D., RATEKIN B.J., LU H.S., LANGLEY K.E.;				
RL	J. BIOL. CHEM. 264:17445-17453(1989).				
CC	-1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)				
CC	AND IRREVERSIBLY INACTIVATE THEM.				
CC	-1- PFM: THE ACTIVITY OF TIMP-2 IS DEPENDENT ON THE PRESENCE OF				
CC	DISULFIDE BONDS.				
CC	-1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.				
DR	EMBL: M32303; G163342; -				
DR	PIR: A25322; A25322.				
DR	PIR: A35966; A35966.				
DR	PIR: A34468; A34468.				
DR	PROSITE: PS00288; TIMP, 1.				
FW	METALLOPROTEINASE INHIBITOR; SIGNAL.				
FT	SIGNAL. 1				
FT	CHAIN 27				
FT	DISULFID 27				
FT	DISULFID 29				
FT	DISULFID 39				
FT	DISULFID 154				
FT	DISULFID 172				
FT	DISULFID 159				
FT	DISULFID 164				

FT CONFLICT 42 42 D -> C (IN REF. 2).
 FT CONFLICT 56 56 D -> E (IN REF. 2).
 FT CONFLICT 68 68 R -> S (IN REF. 2).
 SO SEQUENCE 220 AA; 24355 MW; 0543B3EB CRC32;
 Query Match 100.0%; Score 1651; DB 1; Length 220;
 Best Local Similarity 100.0%; Pred. No. 0.00e+00;
 Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 DB 1 MGAARSLPFLATLILATLPRADACSPVHPQAFNADVIIRAKAVKREVDGND 60
 1 mgsaarslplafcllllgltlpradacspvhpqafcnadivirakavkrevdsnd 60
 QY 1 mgsaarslplafcllllgltlpradacspvhpqafcnadivirakavkrevdsnd 60
 DB 61 IYGNPIKRIQYELIKQIMKFGKPDIEFIYTAPAAVCGSLDVGKREYLLAGKAEKG 120
 61 IYGNPIKRIQYELIKQIMKFGKPDIEFIYTAPAAVCGSLDVGKREYLLAGKAEKG 120
 QY 61 IYGNPIKRIQYELIKQIMKFGKPDIEFIYTAPAAVCGSLDVGKREYLLAGKAEKG 120
 61 IYGNPIKRIQYELIKQIMKFGKPDIEFIYTAPAAVCGSLDVGKREYLLAGKAEKG 120
 DB 121 NMATLDCDFIVPMDTSLTOKKSLNRYOMGCECKITRCPMIPCIYSSPDECLMDWYTE 180
 121 nmhtlclcdflvpwcltsatqkkslnryomgceckitrcpmipciysspdeclmndwvte 180
 QY 121 nmhtlclcdflvpwcltsatqkkslnryomgceckitrcpmipciysspdeclmndwvte 180
 181 KNINGHQAFFACIKRSDSCAWYRGAPPROEFLDIEDP 220
 181 kninghqaftackikrdsdscawyrgaappkqefldiedp 220
 QY 181 kninghqaftackikrdsdscawyrgaappkqefldiedp 220
 RESULT 2
 ID TIM2_HUMAN STANDARD; PRT; 220 AA.
 AC P16035; 093006;
 DT 01-APR-1990 (REL. 14, CREATED)
 DT 01-NOV-1990 (REL. 16, LAST SEQUENCE UPDATE)
 DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
 DE METALLOPROTEINASE INHIBITOR 2 PRECURSOR (TIMP-2) (TISSUE INHIBITOR OF
 GN TIMP-2)
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
 OC EUTHERIA; PRIMATES.
 [1]
 RA SEQUENCE FROM N.A.
 RX MEDLINE: 90338014.
 RA STEHLER-STEVENSON W.G., BROWN P.D., ONISTO M., LEVY A.T., LIOTTA L.A.;
 RL J. BIOL. CHEM. 265:13933-13938(1990).
 RN [2]
 RA SEQUENCE FROM N.A.
 RX MEDLINE: 90207285.
 RA BOONE T.C., JOHNSON M.J., DE CLERCK Y.A., LANGLEY K.E.;
 RL PROC. NATL. ACAD. SCI. U.S.A. 87:2800-2804(1990).
 RN [3]
 RA SEQUENCE FROM N.A.
 RX TISSUE-PLACENTA;
 RA MEDLINE: 96411768.
 RA HAMMAN K., BLAKIS A., MORSETTE D., BOWCOCK A., SCHWUTTE C.,
 RA HENRIET P., DECLERCK Y.A.;
 RL J. BIOL. CHEM. 271:25498-25505(1996).
 RN [4]
 RA SEQUENCE OF 30-214 FROM N.A.
 RX SUBMITTED (AUG-1990) TO EMBL/GENBANK/DBJ DATA BANS.
 RN [5]
 RA SEQUENCE OF 27-219.
 RX MEDLINE: 90008902.
 RA STEHLER-STEVENSON W.G., KRUTZSCH H.C., LIOTTA L.A.;
 RL J. BIOL. CHEM. 264:17374-17378(1989).
 RN [6]
 RA SEQUENCE OF 30-51; 124-141 AND 159-173.
 RX MEDLINE: 90046765.
 RA GOLDBERG G.L., MARMER B.L., GRANT G.A., EISEN A.Z., WILHELM S., HE C.;
 RL PROC. NATL. ACAD. SCI. U.S.A. 86:8207-8211(1989).
 RN [7]
 RA SEQUENCE OF 27-41.
 RX TISSUE-SYNOVIAL FLUID;
 RX MEDLINE: 92111776.

RA OSTHUES A., KNAUEPER V., OBERHOFF R., REINKE H., TSCHESCHE H.;
 RL FEBS LETT. 296:16-20(1992).
 RN [8]
 RP STRUCTURE BY NMR OF 27-153.
 RX MEDLINE: 95001883.
 RA WILLIAMSON R.A., MARGORELL G., CARR M.D., MURPHY G., DOCHERTY A.J.P.,
 RA FREEDMAN R.B., FEENEY J.;
 RL BIOCHEMISTRY 33:11745-11759(1994).
 CC -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)
 AND IRREVERSIBLY INACTIVATE THEM.
 CC -1- PTM: THE ACTIVITY OF TIMP-2 IS DEPENDENT ON THE PRESENCE OF
 DISULFIDE BONDS.
 CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
 DR EMBL: J05593; G339707; -
 DR EMBL: S48568; G298202; -
 DR EMBL: S48385; G1517893; -
 DR EMBL: U44381; G1517893; JOINED.
 DR EMBL: U44382; G1517893; JOINED.
 DR EMBL: U44383; G1517893; JOINED.
 DR EMBL: M32304; G307195; -
 DR EMBL: X54533; G37181; -
 DR PIR: A34415; A34415.
 DR PIR: A34464; A34464.
 DR PIR: B35996; B35996.
 DR PIR: A37128; A37128.
 DR PIR: S20319; S20319.
 DR MIM: 188825; -
 DR PROSITE: PS00288; TIMP; 1.
 KW METALLOPROTEINASE INHIBITOR; SIGNAL.
 FT SIGNAL 1 26
 FT CHAIN 27 220
 FT DISULFID 27 98
 FT DISULFID 29 127
 FT DISULFID 39 152
 FT DISULFID 154 201
 FT DISULFID 172 193
 FT DISULFID 159 164
 FT CONFLICT 17 19
 FT CONFLICT 78 78
 FT CONFLICT 82 82
 FT CONFLICT 96 96
 FT CONFLICT 101 101
 FT CONFLICT 118 118
 FT CONFLICT 122 122
 FT CONFLICT 150 150
 FT CONFLICT 175 175
 SQ SEQUENCE 220 AA; 24399 MW; 834D259A CRC32;
 Query Match 93.9%; Score 1550; DB 1; Length 220;
 Best Local Similarity 91.8%; Pred. No. 0.00e+00;
 Matches 202; Conservative 12; Mismatches 6; Indels 0; Gaps 0;
 DB 1 MGAARSLPFLATLILATLPRADACSPVHPQAFNADVIIRAKAVKREVDGND 60
 1 mgsaarslplafcllllgltlpradacspvhpqafcnadivirakavkrevdsnd 60
 QY 1 mgsaarslplafcllllgltlpradacspvhpqafcnadivirakavkrevdsnd 60
 DB 61 IYGNPIKRIQYELIKQIMKFGKPDIEFIYTAPAAVCGSLDVGKREYLLAGKAEKG 120
 61 IYGNPIKRIQYELIKQIMKFGKPDIEFIYTAPAAVCGSLDVGKREYLLAGKAEKG 120
 QY 61 IYGNPIKRIQYELIKQIMKFGKPDIEFIYTAPAAVCGSLDVGKREYLLAGKAEKG 120
 61 IYGNPIKRIQYELIKQIMKFGKPDIEFIYTAPAAVCGSLDVGKREYLLAGKAEKG 120
 DB 121 NMATLDCDFIVPMDTSLTOKKSLNRYOMGCECKITRCPMIPCIYSSPDECLMDWYTE 180
 121 nmhtlclcdflvpwcltsatqkkslnryomgceckitrcpmipciysspdeclmndwvte 180
 QY 121 nmhtlclcdflvpwcltsatqkkslnryomgceckitrcpmipciysspdeclmndwvte 180
 181 KNINGHQAFFACIKRSDSCAWYRGAPPROEFLDIEDP 220
 181 kninghqaftackikrdsdscawyrgaappkqefldiedp 220
 QY 181 kninghqaftackikrdsdscawyrgaappkqefldiedp 220
 RESULT 3
 ID TIM2_RAT STANDARD; PRT; 220 AA.
 AC P30121;
 DT 01-APR-1993 (REL. 25, CREATED)

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Db 121 KMHITLDEFLVPMOTLSTITOKKSLNHHYOGCECKITRCMNICYISSPECIMADNTE 180
      :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Oy 121 nmhltcdflvpmvdtlsatqtkslnhrygmceckitrcmipcysspedclmndwte 180

Db 181 KSINGHOAKFEFACIKRSDGSCAMYRGAPAPKOEFLDIEDP 220
      :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Oy 181 knunghakffacikrdsdgcawyrqapppkgelflndep 220

RESULT 4 STANDARD; PRT; 220 AA.
ID ID TIM2_MOUSE AC P25785;
DT 01-MAY-1992 (REL. 22, CREATED)
DT 01-APR-1993 (REL. 25, LAST SEQUENCE UPDATE)
DT 01-NOV-1995 (REL. 32, LAST ANNOTATION UPDATE)
DE METALLOPROTEINASE INHIBITOR 2 PRECURSOR (TIMP-2) (TISSUE INHIBITOR OF
DE METALLOPROTEINASES-2).
OS TIMP2 OR TIMP-2.
OS MOS MUSCULUS (MUSE).
OC EDGARROTA; METAEOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
OC EUTHERIA; RODENTIA.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN-BALB/C;
RX MEDLINE; 92290292.
RX SHIMIZU S., MALIK K., SEJIMA H., KISHI J.I., HAYAKAWA T., KOJIMA O.;
RA SHIMIZU S., MALIK K., SEJIMA H., KISHI J.I., HAYAKAWA T., KOJIMA O.;
RA LEOO K.J., HAYDEN L.J., SHARMA R.R., ROCHELLEAU H., GREENBERG A.H.,
RA EDWARDS D.R.;
RL GENE 114:291-292(1992).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE; 92347695.
RA LEOO K.J., HAYDEN L.J., SHARMA R.R., ROCHELLEAU H., GREENBERG A.H.,
RA EDWARDS D.R.;
RL GENE 117:209-217(1992).
RN [3]
RP PRELIMINARY SEQUENCE OF 27-62.
RX MEDLINE; 91226375.
RX KISHI J.I., OGAWA K., YAMAMOTO S., HAYAKAWA T.;
RL MATRIX 11:10-16(1991).
CC -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)
CC AND IRREVERSIBLY INACTIVATE THEM.
CC -1- PKM: THE ACTIVITY OF TIMP-2 IS DEPENDENT ON THE PRESENCE OF
CC DISULFIDE BONDS.
CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
DR EMBL; M62622; G54802; -
DR EMBL; M82858; G202052; -
DR EMBL; M93954; G302054; -
DR PIR; S15987; S15987.
DR PIR; JH0683; JH0683.
DR MGD; MGI:98753; TIMP2.
DR PROSITE; PS00288; TIMP.1.
DR KW METALLOPROTEINASE INHIBITOR; SIGNAL.
FT SIGNAL 1 26
FT CHAIN 27 220 METALLOPROTEINASE INHIBITOR 2.
FT DISULFID 27 98 BY SIMILARITY.
FT DISULFID 29 127 BY SIMILARITY.
FT DISULFID 29 152 BY SIMILARITY.
FT DISULFID 154 201 BY SIMILARITY.
FT DISULFID 172 193 BY SIMILARITY.
FT DISULFID 159 164 BY SIMILARITY.
FT CONFLICT 12 12 L -> H (IN REF. 2).
FT CONFLICT 21 21 V -> L (IN REF. 2).
FT CONFLICT 195 195 K -> E (IN REF. 2).
FT CONFLICT 195 195 V -> E (IN REF. 2).
SQ SEQUENCE 220 AA; 24328 MW; EBC62EFC CRC32;

Query Match 93.0%; Score 1536; DB 1; Length 220;
Best Local Similarity 91.4%; Pred. No. 0.00e+00;
Matches 201; Conservative 12; Mismatches 7; Indels 0; Gaps 0;
1 MGAARSLRLALGLLTLATVPADACSCSVPHOQAFPCNADVYIRAKVASEKEVDSGND 60
||||| |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
1 mgaarstlpfcllllytllprdadscsvphqgafcnadivirakavnkkevdsqnd 60

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OY 61 lypnpixrlgylqymfkyppddqdietylcapaavcgsldlgykkeyllagkaeng 120
 DB 121 KMHITLDEIYPMPTLSTOKKSLNHRQMGCECKITPCPIYISPPDECIMMDWTE 180
 OY 121 nmhtlccfltpwcltsatqkkslnhryqmgcecltfcplmpcylsspdclmwdvte 180
 DB 181 KSIHQAKFEPACIKRSKSCAWYGAAPPOEFLDIEDP 220
 OY 181 knlunghqakftacklrsdsgscawyrgaaprkqefldiedp 220
 RESULT 5
 ID TIM3_HUMAN STANDARD; PRT: 211 AA.
 AC P35625;
 DT 01-JUN-1994 (REL. 29, LAST SEQUENCE UPDATE)
 DT 01-FEB-1995 (REL. 31, LAST SEQUENCE UPDATE)
 DT 01-NOV-1997 (REL. 35, LAST SEQUENCE UPDATE)
 DE METALLOPROTEINASE INHIBITOR 3 PRECURSOR (TIMP-3) (TISSUE INHIBITOR OF METALLOPROTEINASES-3) (MIG-5 PROTEIN).
 TIMP3.
 HOMO SAPIENS (HUMAN).
 EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
 OC EUTHERIA; PRIMATES.
 (1)
 RC SEQUENCE FROM N.A.
 RP TISSUE-KIDNEY;
 RX MEDLINE: 94215920.
 RA SLIBIGER S.M., JACOBSEN V.L., CUPPLES R.L., KOSKI R.A.;
 RL GENE 141:293-297(1994).
 (2)
 RC SEQUENCE FROM N.A.
 RP TISSUE-BREAST CARCINOMA;
 RX MEDLINE: 94228524.
 RA URIA J.A., FERRANDO A.A., VELASCO G., FREITE J.M., LOPEZ-OTIN C.;
 RL CANCER RES. 54:2091-2094(1994).
 (3)
 RC SEQUENCE FROM N.A.
 RP MEDLINE: 94308155.
 RA WICK M., BUDGER C., BRUESSELBACH S., LUCIBELLO F., MUELLER R.;
 RL J. BIOL. CHEM. 269:18953-18960(1994).
 (4)
 RC SEQUENCE FROM N.A.
 RP MEDLINE: 95290091.
 RA WILDE C.G., HAWKINS P.R., COLEMAN R.T., LEVINE W.B.,
 DELEBEAUNE A.M., OKAMOTO P.M., ITO L.Y., SCOTT R.W., SEILHAUER J.J.;
 RL DNA CELL BIOL. 13:711-718(1994).
 (5)
 RC SEQUENCE FROM N.A.
 RP MEDLINE: 96404191.
 RA STOEHR H., ROOMP K., FELBOR U., WEBER B.H.F.;
 RL GENOME RES. 5:483-487(1995).
 (6)
 RC SEQUENCE FROM N.A.
 RP TISSUE-RETINAL PIGMENT EPITHELIUM;
 RX RUIZ A.C.;
 RL SUBMITTED (SEP-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 (7)
 RC SEQUENCE OF 42-211 FROM N.A.
 RP TISSUE-PLACENTA;
 RA HAMMANI K., HENRIET P.M., SLIBIGER S.M., DECICERK Y.A.;
 RL SUBMITTED (MAY-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 (8)
 RC SEQUENCE OF 14-211 FROM N.A.
 RP TISSUE-PLACENTA;
 RX MEDLINE: 94245184.
 RA ATE S.S., MATTEI M.G., OLSEN B.R.;
 RL GENOMICS 19:86-90(1994).
 (9)
 RC VARIANTS SFD CYS-191 AND CYS-204.
 RP MEDLINE: 95201800.
 RA WEBER B.H.F., VOGT G., PROUET R.C., STOEHR H., FELBOR U.;
 RL NAT. GENET. 8:352-356(1994).

RN [10]
 RP VARIANT SFD CYS-179.
 RX MEDLINE: 96177683.
 RA FELBOR U., STOEHR H., AMANN T., SCHOENHERR U., WEBER B.H.F.;
 RL HUM. MOL. GENET. 4:2415-2416(1995).
 (11)
 RN RP VARIANT SFD CYS-191.
 RX MEDLINE: 96341630.
 RA FELBOR U., STOEHR H., AMANN T., SCHOENHERR U., APFELSTEDT-STYLA E.,
 WEBER B.H.F.;
 RL J. MED. GENET. 33:233-236(1996).
 CC -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES) AND IRREVERSIBLY INACTIVATE THEM. MAY FORM PART OF A TISSUE-SPECIFIC ACUTE RESPONSE TO REMODELING STIMULI.
 CC -1- SUBCELLULAR LOCATION: EXTRACELLULAR MATRIX.
 CC -1- DISEASE: DEFECTS IN TIMP3 ARE THE CAUSE OF SORSEY'S FUNDS DYSTROPHY (SFD), A RARE AUTOSOMAL DOMINANT MACULAR DISORDER WITH AN AGE OF ONSET IN THE FOURTH DECADE. IT IS CHARACTERIZED BY LOSS OF CENTRAL VISION FROM SUBRETINAL, NEOVASCULARIZATION AND ATROPHY OF THE OCULAR TISSUES. GENERALLY, MACULAR DISCIFORM DEGENERATION DEVELOPS IN THE PATIENTS EYE WITHIN 6 MONTHS TO 6 YEARS.
 CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
 CC EMBL: U14394; G608129; -.
 CC EMBL: U02571; G472310; -.
 CC EMBL: X76227; G495252; -.
 CC EMBL: Z30183; G520932; ALT_SEQ.
 CC EMBL: S78453; G998826; -.
 CC EMBL: U33114; G1215682; -.
 CC EMBL: U33110; G1215682; JOINED.
 CC EMBL: U33112; G1215682; JOINED.
 CC EMBL: U33113; G1215682; JOINED.
 CC EMBL: U38952; G1304484; -.
 CC EMBL: U38952; G1304484; JOINED.
 CC EMBL: U38953; G1304484; JOINED.
 CC EMBL: U38954; G1304484; JOINED.
 CC EMBL: U67195; G1519558; -.
 CC EMBL: L15078; G407035; -.
 CC PIR: S45317; S45317.
 CC MIM: 188826; -.
 CC MIM: 136900; -.
 DR PROSITE: PS00288; TIMP; 1.
 DR KW METALLOPROTEINASE INHIBITOR; SIGNAL; DISEASE MUTATION.
 FT SIGNAL 1 23
 FT CHAIN 24 211
 FT DISULFID 24 91
 FT DISULFID 26 118
 FT DISULFID 36 143
 FT DISULFID 145 192
 FT DISULFID 150 155
 FT DISULFID 163 184
 FT VARIANT 179 191
 FT VARIANT 191 191
 FT VARIANT 204 204
 FT CONFLICT 16 16
 FT CONFLICT 18 19
 FT CONFLICT 21 22
 FT CONFLICT 22 23
 FT CONFLICT 22 23
 SQ SEQUENCE 211 AA; 24145 MW; 5FAL5ANA CRC32;
 Query Match 41.2%; Score 681; DB 1; Length 211;
 Best Local Similarity 43.7%; Pred. No. 4,35e-150;
 Matches 87; Conservative 51; Mismatches 51; Indels 10; Gaps 8;
 DB 21 AEAAGTSPSPHPOAFNCNSDIVIRAKYVGRKLVKEGP-FGT-L-V-YTIKOKMAYRGFT 74
 OY 24 adacspsvnpqgafcnadivirakvknkvevsgndiygnpkiriyekqlmktgyp 82
 DB 75 KMPHYOYIHTFASLGLGLEVN-KYQYILIGRYV-DGKMTGLGCLNVERDQTLRSR 132
 OY 83 d-qdieflylcapaavcgsldlgykkeyllagkaengnmhtlccfltpwcltsatqk 141
 DB 133 KGLNRYHLCNCKIRKSCYLLPCFVTSKNKCLMTDMLSNFGYGYGSKHYACIRQGGYTC 192

142 kslnhrygmceckitrcpmipcyisspdeclmndwvteknlnghqackfacklrsdgc 201
193 SWRGMAPPDKSIINATDP 211
202 awyrgaapbkgefildedp 220

RESULT 6
ID TIM3_CHICK STANDARD; PRT; 212 AA.

AC P26652;
DT 01-AUG-1992 (REL. 23, CREATED)
DT 01-DEC-1992 (REL. 24, LAST SEQUENCE UPDATE)
DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
DE METALLOPROTEINASE INHIBITOR 3 PRECURSOR (TIMP-3) (TISSUE INHIBITOR OF METALLOPROTEINASES-3) (21 KD PROTEIN OF EXTRACELLULAR MATRIX).
GN TIMP3 OR TIMP-3.
OS GALUS GALUS (CHICKEN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; AVES; NEOGNATHAE; GALLIFORMES.

[1]
SEQUENCE FROM N.A.
TISSUE-EMBRYONIC FIBROBLAST;
MEDLINE; 92381050.
RA PAYLOEF N., STASKUS P.W., KISHANANI N.S., HAWKES S.P.;
RL J. BIOL. CHEM. 267:17321-17326(1992).

[2]
SEQUENCE OF 25-53.
RC TISSUE-FIBROBLAST;
MEDLINE; 91093162.
RX STASKUS P.W., MASLAR F.R., PALLANCK L.J., HAWKES S.P.;
RL J. BIOL. CHEM. 266:449-454(1991).
CC -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES) AND IRREVERSIBLY INACTIVATE THEM. MAY FORM PART OF A TISSUE-SPECIFIC ACUTE RESPONSE TO REMODELING STIMULI.
CC -1- SUBCELLULAR LOCATION: EXTRACELLULAR MATRIX.
CC EMBL; M94531; G211902; -
DR EMBL; A39043; A39043.
DR PIR; A43429; A43429.
DR PROSITE; PS00288; TIMP; 1.
DR METALLOPROTEINASE INHIBITOR; SIGNAL.

FT SIGNAL 1 24
FT CHAIN 25 212
FT DISULFID 25 92
FT DISULFID 27 119
FT DISULFID 37 144
FT DISULFID 146 193
FT DISULFID 151 156
FT DISULFID 164 185
SQ SEQUENCE 212 AA; 24504 MW; C0489CGF CRC32;

Query Match 41.2%; Score 680; DB 1; Length 212;
Best Local Similarity 44.7%; Pred. No. 8,226-150;
Matches 89; Conservative 49; Mismatches 51; Indels 10; Gaps 8;

DB 22 AEAQCVPIHPDADFNSDIVIRAKVVKRLMDGP--FGT-M-R--YVQKMKRYBFGQ 75
142 kslnhrygmceckitrcpmipcyisspdeclmndwvteknlnghqackfacklrsdgc 201
193 SWRGMAPPDKSIINATDP 212
202 awyrgaapbkgefildedp 220

RESULT 7
ID TIM3_BOVIN STANDARD; PRT; 211 AA.

AC P79121;
DT 01-NOV-1997 (REL. 35, CREATED)
DT 01-NOV-1997 (REL. 35, LAST SEQUENCE UPDATE)
DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
DE METALLOPROTEINASE INHIBITOR 3 PRECURSOR (TIMP-3) (TISSUE INHIBITOR OF METALLOPROTEINASES-3).
GN TIMP3.
OS BOS TAURUS (BOVINE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA; EUTHERIA; ARTIODACTYLA.

[1]
SEQUENCE FROM N.A.
TISSUE-PLACENTA;
MEDLINE; 97138091.
RX SU S., DENHADE F., ZAFARULLAH M.;
RA DNA CELL BIOL. 15:1039-1048(1996).
CC -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES) AND IRREVERSIBLY INACTIVATE THEM. MAY FORM PART OF A TISSUE-SPECIFIC ACUTE RESPONSE TO REMODELING STIMULI.
CC -1- SUBCELLULAR LOCATION: EXTRACELLULAR MATRIX.
CC EMBL; U77588; G1684818; -
DR PROSITE; PS00288; TIMP; 1.
DR METALLOPROTEINASE INHIBITOR; SIGNAL; DISEASE MUTATION.

FT SIGNAL 1 23
FT CHAIN 24 211
FT DISULFID 24 91
FT DISULFID 26 118
FT DISULFID 36 143
FT DISULFID 145 192
FT DISULFID 150 155
FT DISULFID 163 184
FT CARBOHYD 207
SQ SEQUENCE 211 AA; 24197 MW; 2AE2CB02 CRC32;

Query Match 40.7%; Score 672; DB 1; Length 211;
Best Local Similarity 41.9%; Pred. No. 1,336-147;
Matches 90; Conservative 57; Mismatches 56; Indels 12; Gaps 10;

DB 5 LGLVLLGSWSLDGMAEACTCSHPDADFNSDIVIRAKVVKRLMDGP--FGT-M-60
10 lafccllllg-tlpr-adacscspvhpqgafcnadlvtrkavnkveysgndlygnplk 67
DB 61 -V-YTIKMKRYGFTKMPHVQIITEASESLCGLKLEVN-KIYQILITGRVY-DGKATYG 116
68 rlygelkqkmfgy-pd-gtlefiylapaaavgsidlgkkeyllagkaegngnmhlt 125
DB 117 LCNFVERMDQLTSQKGLNRYHLCNCKIKSCYILPCVTSKNEGLWDMDSNFGPYG 176
126 lcdflvpwcdltsatqkkslnhrygmceckitrcpmipcyisspdeclmndwvteknlngh 185
DB 177 YOSKRVACIROKGCYSWYRGMAPPDKSIINATDP 211
186 hgakffacklrsdgcawyrgaapbkgefildedp 220

RESULT 8
ID TIM3_MOUSE STANDARD; PRT; 211 AA.

AC P39876;
DT 01-FEB-1995 (REL. 31, CREATED)
DT 01-FEB-1995 (REL. 31, LAST SEQUENCE UPDATE)
DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
DE METALLOPROTEINASE INHIBITOR 3 PRECURSOR (TIMP-3) (TISSUE INHIBITOR OF METALLOPROTEINASES-3).
GN TIMP3 OR TIMP-3 OR SDV.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA; EUTHERIA; RODENTIA.

[1]
SEQUENCE FROM N.A.
MEDLINE; 94179361.

OC EUTHERIA; ARTIODACTYLA.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 90365711.
 RA FREDENSTEIN J., WAGNER S., LUCK R.M., EINSPIANIER R., SCHEIT K.H.;
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 171:250-256(1990).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 94257757.
 RA SATOH T., KOBAYASHI K., YAMASHITA S., KIKUCHI M., SENDAI Y., HOSHI H.;
 RL BIOL. REPROD. 50:835-844(1994).
 RN [3]
 RP PRELIMINARY SEQUENCE OF 24-69.
 RX MEDLINE: 90008914.
 RA DE CIERCK T.A., YEAN T.D., RATZKIN B.J., LU H.S., LANGLEY K.E.;
 RL J. BIOL. CHEM. 264:17445-17453(1989).
 CC -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)
 AND IRREVERSIBLY INACTIVATE THEM.
 CC -1- PTM: THE ACTIVITY OF TIMP-1 IS DEPENDENT ON THE PRESENCE OF
 DISULFIDE BONDS.
 CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
 EMBL: M60073; G163761; -
 DR EMBL: S70841; G546974; -
 DR PIR: A35685; A35685.
 DR PIR: B34468; B34468.
 DR PROSITE: PS00288; TIMP: 1.
 KW GLYCOPROTEIN; METALLOPROTEINASE INHIBITOR; ERYTHROCYTE MATURATION;
 KM SIGNAL.
 FT SIGNAL. 1 23
 FT CHAIN 24 207 METALLOPROTEINASE INHIBITOR 1.
 FT DISULFID 24 93 BY SIMILARITY.
 FT DISULFID 26 122 BY SIMILARITY.
 FT DISULFID 36 147 BY SIMILARITY.
 FT DISULFID 150 197 BY SIMILARITY.
 FT DISULFID 155 160 BY SIMILARITY.
 FT DISULFID 168 189 BY SIMILARITY.
 FT CARBOHYD 53 53 POTENTIAL.
 FT CARBOHYD 101 101 POTENTIAL.
 SQ SEQUENCE 207 AA; 23031 MW; 2D1LED5F CRC32;
 Query Match 31.0%; Score 512; DB 1; Length 207;
 Best Local Similarity 38.9%; Pred. No. 6,82e-104;
 Matches 77; Conservative 43; Mismatches 71; Indels 7; Gaps 7;
 DB 6 PNASGILLMLAPRACCTVCPHPOTAFNSDVIYRAKFGVTAENE-TALYOREIK 64
 QY 9 plafelllllgcllpradacscspvhpqafcnadivlrakavkvegsndlygn-plk 67
 QY 65 MTK-MKGFALNDA-PDIRFITYPAMESVCGYFHRSHNSEELLGOL-SNGHLITT 121
 QY 68 rlygelqlkmfkyppdqdlfiyltapaavcysldigkkyllagkaegngnmhltl 126
 DB 122 CSFVAPWNSLSAQRGFTTYVGCCECTVFPCSSIPCKLOSPTRHCLMTDOLGSDKG 181
 QY 127 cdfivpwtlsatqkkslnhrygmge-ckltrcpmlpcylsspdeclwmdvteknng 185
 DB 182 FOSRHLCAPREPGLCTW 199
 QY 186 hgakffaclrtdsgscaw 203
 RESULT 11
 ID TIML_PAPCY STANDARD; PRT; 207 AA.
 AC P49061;
 DT 01-FEB-1996 (REL. 33, CREATED)
 DT 01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE)
 DT 01-FEB-1996 (REL. 33, LAST ANNOTATION UPDATE)
 DE METALLOPROTEINASE INHIBITOR 1 PRECURSOR (TIMP-1).
 GN TIMP1.
 OS PAVIO CYNOCEPHALUS (YELLOW BABOON).
 OS EUMAROTIA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
 OC EUTHERIA; PRIMATES.
 [1]

RP SEQUENCE FROM N.A.
 RC TISSUE-AORTA;
 RX MEDLINE: 96011646.
 RA FOROUGH R., NIKKARI S.T., HASENSTAB D., LEA H., CLOWES A.W.;
 RL GENE 163:267-271(1995).
 CC -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)
 AND IRREVERSIBLY INACTIVATE THEM.
 CC -1- PTM: THE ACTIVITY OF TIMP-1 IS DEPENDENT ON THE PRESENCE OF
 DISULFIDE BONDS.
 CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
 EMBL: L37295; G561546; -
 DR PROSITE: PS00288; TIMP: 1.
 KW GLYCOPROTEIN; METALLOPROTEINASE INHIBITOR; ERYTHROCYTE MATURATION;
 KM SIGNAL.
 FT SIGNAL. 1 23
 FT CHAIN 24 207 METALLOPROTEINASE INHIBITOR 1.
 FT DISULFID 24 93 BY SIMILARITY.
 FT DISULFID 26 122 BY SIMILARITY.
 FT DISULFID 36 147 BY SIMILARITY.
 FT DISULFID 150 197 BY SIMILARITY.
 FT DISULFID 155 160 BY SIMILARITY.
 FT DISULFID 168 189 BY SIMILARITY.
 FT CARBOHYD 53 53 POTENTIAL.
 FT CARBOHYD 101 101 POTENTIAL.
 SQ SEQUENCE 207 AA; 23213 MW; 14EFBD4E CRC32;
 Query Match 31.0%; Score 511; DB 1; Length 207;
 Best Local Similarity 39.9%; Pred. No. 1.27e-103;
 Matches 79; Conservative 40; Mismatches 72; Indels 7; Gaps 7;
 DB 6 PNASGILLMLAPRACCTVCPHPOTAFNSDVIYRAKFGVTPVNOQT-LYOREYIK 64
 QY 9 plafelllllgcllpradacscspvhpqafcnadivlrakavkvegsndlygn-plk 67
 DB 65 MTK-MKGFALNDA-PDIRFITYPAMESVCGYFHRSHNSEELLGOL-SNGHLITT 121
 QY 68 rlygelqlkmfkyppdqdlfiyltapaavcysldigkkyllagkaegngnmhltl 126
 DB 122 CSFVAPWNSLSAQRGFTTYVGCCECTVFPCSSIPCKLOSPTRHCLMTDOLGSDKG 181
 QY 127 cdfivpwtlsatqkkslnhrygmge-ckltrcpmlpcylsspdeclwmdvteknng 185
 DB 182 FOSRHLCAPREPGLCTW 199
 QY 186 hgakffaclrtdsgscaw 203
 RESULT 12
 ID TIML_HUMAN STANDARD; PRT; 207 AA.
 AC P01033; Q14252;
 DT 21-JUL-1986 (REL. 01, CREATED)
 DT 21-JUL-1986 (REL. 01, LAST SEQUENCE UPDATE)
 DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
 DE METALLOPROTEINASE INHIBITOR 1 PRECURSOR (TIMP-1) (ERYTHROID
 POTENTIATING ACTIVITY) (EPA) (TISSUE INHIBITOR OF METALLOPROTEINASES)
 (FIBROBLAST COLLAGENASE INHIBITOR) (COLLAGENASE INHIBITOR).
 GN TIMP1 OR TIMP.
 OS HOMO SAPIENS (HUMAN).
 OS EUMAROTIA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
 OC EUTHERIA; PRIMATES.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 86040463.
 RA DOCHERTY A.J.P., LYONS A., SMITH B.J., WRIGHT E.M., STEPHENS P.E.,
 RA HARRIS T.J.R., MORPHY G., REYNOLDS J.J.;
 RL NATURE 318:66-69(1985).
 GN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 85240567.
 RA GASSON J.C., GOLDE D.W., KAUFMAN S.E., WESTBROOK C.A., HENICK R.M.,
 RA KAUFMAN R.J., WONG G.G., TEMPLE P.A., LEARY A.C., BROWN E.L.,
 RA ORR E.C., CLARK S.C.;
 RL NATURE 315:768-771(1985).

QY	132	pwdtlsatqktslnhrygmce-cxltcrpmipcyalspsdeclwmwvteknunghqaf	190
Db	187	LACIPREFGACTW	199
QY	191	factkrsdscaw	203
RESULT	15	STANDARD;	PRT; 205 AA.
ID	TM1	MOUSE	
AC	P12032;	P20064;	
DT	01-OCT-1989	(REL. 12, CREATED)	
DT	01-MAY-1991	(REL. 18, LAST SEQUENCE UPDATE)	
DT	01-NOV-1997	(REL. 35, LAST ANNOTATION UPDATE)	
DE	METALLOPROTEINASE INHIBITOR 1 PRECURSOR (TIMP-1) (ERYTHROID		
DE	POTENTIATING ACTIVITY) (EFA) (TISSUE INHIBITOR OF METALLOPROTEINASES)		
DE	(COLLAGENASE INHIBITOR 16C8 FIBROBLAST) (TPA-INDUCED PROTEIN)		
DE	(TPA-SI).		
GN	TMPI1 OR TIMP-1 OR TIMP.		
OS	MUS MUSCULUS (MOUSE).		
OC	EUKARIOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;		
OC	EUTHERIA; RODENTIA.		
RN	[1]		
RP	SEQUENCE FROM N.A.		
RX	MEDLINE: 87218524.		
RA	GENERT D.R., COUDLOMBE B., CASTELLINO M., SKUP D., WILLIAMS B.R.G.;		
RL	EMBO J. 6:651-657(1987).		
RN	[2]		
RP	SEQUENCE FROM N.A.		
RC	TISSUE-FIBROBLAST;		
RX	MEDLINE: 87066763.		
RA	EDWARDS D.R., WATERHOUSE P., HOLMAN M.L., DENHARDT D.T.;		
RL	NUCLEIC ACIDS RES. 14:863-867(1986).		
RN	[3]		
RP	SEQUENCE FROM N.A.		
RC	STRAIN-C3H;		
RX	MEDLINE: 88038821.		
RA	JOHNSON M.D., HODSEY G.M., KIRSCHMEIER P.T., WEINSTEIN I.B.;		
RL	MOL. CELL. BIOL. 7:2821-2829(1987).		
CC	-1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES		
CC	AND IRREVERSIBLY INACTIVATE THEM. ALSO MEDIATES ERYTHROPOIESIS IN		
CC	VITRO. BUT, UNLIKE IL-3, IT IS SPECIES-SPECIFIC, STIMULATING THE		
CC	GROWTH AND DIFFERENTIATION OF ONLY HUMAN AND MURINE ERYTHROID		
CC	PROGENITORS.		
CC	-1- TISSUE SPECIFICITY: FOUND IN FETAL AND ADULT TISSUES. HIGHEST		
CC	LEVELS ARE FOUND IN BONE. ALSO FOUND IN LUNG, OVARY AND UTERUS.		
CC	-1- INDUCTION: BY VIRUS.		
CC	-1- INDUCTION: REGULATED BY TUMOR PROMOTERS AND MITOGENS THROUGH		
CC	PROTEIN KINASE C.		
CC	-1- PIV: THE ACTIVITY OF TIMP-1 IS DEPENDENT ON THE PRESENCE OF		
CC	DISULFIDE BONDS.		
CC	-1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.		
DR	EMBL: M28312; G193042; -.		
DR	EMBL: M28308; G193042; JOINED.		
DR	EMBL: M28309; G193042; JOINED.		
DR	EMBL: M28310; G193042; JOINED.		
DR	EMBL: M28311; G193042; JOINED.		
DR	EMBL: X04684; G49704; -.		
DR	EMBL: M17243; G202112; -.		
DR	EMBL: M28312; G193042; -.		
DR	PIR: A26633; A26633.		
DR	PIR: A26106; A26106.		
DR	PIR: A26917; A26917.		
DR	MGI: MGI:98752; TIMP.		
DR	PROSITE: PS00288; TIMP. 1.		
KW	GLYCOPROTEIN; METALLOPROTEINASE INHIBITOR; ERYTHROCYTE MATURATION;		
KW	SIGNAL.		
FT	SIGNAL	1	24
FT	CHAIN	25	205
FT	DISULFID	25	94
FT	DISULFID	27	123
FT	DISULFID	37	148
FT	DISULFID	151	197
			BY SIMILARITY.
			BY SIMILARITY.
			BY SIMILARITY.

 WISE (TM)

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MParch_pp protein - protein database search, using Smith-Waterman algorithm
 on: Mon May 4 14:47:31 1998; Maspar time 17.84 Seconds
 519.169 Million cell updates/sec
 Dual output not generated.

Title: >R07954
 Description: (1-220) from a-geneseq.pep
 Perfect Score: 1651
 Sequence: 1 mgsaaarplafcllllgtl.....cayrgaapkgelfldedp 220

Scoring table: PAM 150
 Gap 11

Searched: 140555 seqs, 42109429 residues

Post-processing: Minimum Match 08
 Listing first 45 summaries

Database:

sptrembl5
 1:sp_fungi 2:sp_human 3:sp_invertebrate 4:sp_mammal
 5:sp_mhc 6:sp_organelle 7:sp_phase 8:sp_plant
 9:sp_bacteria 10:sp_proteat 11:sp_virus 12:sp_vertebrate
 13:sp_unclassified

Statistics: Mean 43.195; Variance 65.893; scale 0.656

Pred. No. is the number of results predicted by chance to have a
 score greater than or equal to the score of the result being printed,
 and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description	Pred. No.
1	1430	86.6	196	10	060453	TISSUE INHIBITOR OF ME 0.00e+00
2	1285	77.8	220	12	042146	TISSUE INHIBITOR OF ME 0.00e+00
3	817	49.5	224	2	099727	TISSUE INHIBITOR OF ME 4.20e-182
4	460	27.9	207	4	002722	TISSUE INHIBITOR OF ME 2.90e-87
5	455	27.6	176	10	P70533	METALLOPROTEINASE INHI 5.72e-86
6	249	15.1	50	2	016121	TIWP-2-METALLOPROTEINA 1.95e-34
7	213	12.9	158	3	021265	SIMILAR TO METALLOPROT 5.02e-26
8	99	6.0	38	10	061720	MESSINGER RNA FRAGMENT 1.60e-02
9	92	5.6	512	8	040271	MYO-INOSITOL-1-PHOSPHA 2.23e-01
10	92	5.6	668	9	048287	HISTIDINE KINASE. 2.23e-01
11	91	5.5	376	8	039353	CELL WALL-PLASMA MEMBR 2.23e-01
12	89	5.4	113	10	061259	ABEILSON MURINE LEUKEMI 6.61e-01
13	89	5.4	114	10	061260	ABEILSON MURINE LEUKEMI 6.61e-01
14	89	5.4	115	2	013691	ABL PROTEIN (FRAGMENT) 6.61e-01
15	89	5.4	119	10	097896	ABEILSON MURINE LEUKEMI 6.61e-01
16	89	5.4	119	2	013915	C-ABL (FRAGMENT). 6.61e-01
17	89	5.4	138	10	061261	ABEILSON MURINE LEUKEMI 6.61e-01
18	89	5.4	144	2	013848	BCR/C-ABL ONCOGENE PRO 6.61e-01
19	89	5.4	156	2	014020	BCR/C-ABL ONCOGENE PRO 6.61e-01
20	89	5.4	164	2	013690	HYPOTHETICAL PROTEIN (6.61e-01

21	89	5.4	181	10	061253	C-ABL PROTEIN, TYPE II 6.61e-01
22	89	5.4	182	10	061255	C-ABL PROTEIN, TYPE II 6.61e-01
23	89	5.4	187	10	061254	C-ABL PROTEIN, TYPE II 6.61e-01
24	89	5.4	206	10	061252	C-ABL PROTEIN, TYPE IV 6.61e-01
25	89	5.4	284	2	013692	BCR/ABL FUSION PROTEIN 6.61e-01
26	89	5.4	433	3	023275	SIMILAR TO S. CEREVISI 6.61e-01
27	89	5.4	583	9	030411	POTATIVE ABC-TRANSPORT 6.61e-01
28	89	5.4	1130	2	013870	PROTO-ONCOGENE TYROSIN 6.61e-01
29	89	5.4	1149	2	013869	PROTO-ONCOGENE TYROSIN 6.61e-01
30	89	5.3	226	11	041968	TEGURENT PROTEIN. 9.44e-01
31	87	5.3	365	7	037993	MAJOR HEAD PROTEIN. 1.34e+00
32	87	5.3	383	10	062779	PREDIPOTCYTE FACTOR 1. 1.34e+00
33	88	5.3	476	1	012619	ACYL-COA DESATURASE 1. 9.44e-01
34	88	5.3	1117	9	053971	FIBRONECTIN BINDING PR 9.44e-01
35	86	5.2	321	3	019567	COSMID F18E9. 1.90e+00
36	86	5.2	323	2	093093	TRUNCATED LYOSOMAL AC 1.90e+00
37	86	5.2	987	2	016680	ALPHA-MANNOSIDASE (EC 1.90e+00
38	86	5.2	988	2	093094	LYOSOMAL ACID ALPHA-M 1.90e+00
39	86	5.2	1010	2	000754	LYOSOMAL ALPHA-MANNOS 1.90e+00
40	86	5.2	1010	2	015330	LYOSOMAL ALPHA-MANNOS 1.90e+00
41	86	5.2	1373	11	041943	MAJOR CAPSID PROTEIN. 1.90e+00
42	85	5.1	249	3	020700	COSMID F53B1. 2.69e+00
43	84	5.1	506	9	P96824	HYPOTHETICAL 55.0 KD P 3.79e+00
44	85	5.1	589	3	017935	C12D8.1A. 2.69e+00
45	85	5.1	1014	10	035937	POLY(ADP-RIBOSE) POLYM 2.69e+00

ALIGNMENTS

RESULT ID	1	PRELIMINARY:	PRT:	196 AA.
AC	060453			
DT	01-NOV-1996 (TREMBLREL. 01, CREATED)			
DT	01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)			
DT	01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)			
DE	TISSUE INHIBITOR OF METARO PROTEINASE (FRAGMENT).			
OS	CRICETUS LONGICAUDATUS (LONG-TAILED HAMSTER) (CHINESE HAMSTER).			
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;			
OC	EUTHERIA; RODENTIA.			
RN	[1]			
RP	SEQUENCE FROM N.A.			
RA	SUZUKI Y.;			
RL	SUBMITTED (NOV-1993) TO EMBL/GENBANK/DBJ DATA BANKS.			
DR	EMBL: X75924; G414877; -			
DR	PROSITE: P500288; TIMP; 1.			
FT	NON_TER			
FT	CHAIN 3 196			
SO	SEQUENCE 196 AA; 21941 MW; 2DE3230A CRC32;			

Query Match 86.6%; Score 1430; DB 10; Length 196;
 Best Local Similarity 94.4%; Pred. No. 0.00e+00;
 Matches 184; Conservative 9; Mismatches 2; Indels 0; Gaps 0;

DB	2	ACGSPVHPQOAFNCMDVYIRAKAVSEKEVDSGNDYGNPIRIQYERIQIKAFKGPDKD 61
QY	26	acgspvhpqafncmdvyrakavsekevdsgndygnpiriqyerkqikmfkspdq 85
DB	62	IEFTYAPSSAVGSLDVGKREYLLIAGKADGKMHITLDCDFVPMWTLSTTKRSIN 121
QY	86	ieftypaavsgslvdgkreylliaagkdgkmtltdcdfvpmwltltsatqkksin 145
DB	122	HRVQMGCEKTRPCNIPYISSPDECLMDWYTESINGHQAFKCRKSDGSCAMWR 181
QY	146	hrvqmgcecktrpcnipyisspdeclmwdvtesinghqafkcrkrsdgscaayr 205
DB	182	GAAPKROEFIDEDP 196
QY	206	gaapkrqefidiedp 220
RESULT	2	
ID	042146	PRELIMINARY: PRT: 220 AA.

AC 042146; (TREMBLER. 05, CREATED)
DT 01-JAN-1998 (TREMBLER. 05, LAST SEQUENCE UPDATE)
DT 01-JAN-1998 (TREMBLER. 05, LAST SEQUENCE UPDATE)
DE TISSUE INHIBITOR OF METALLOPROTEINASE-2 PRECURSOR.
GN TIME-2.
OS GALLUS GALLUS (CHICKEN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; AVES; NEOGNATHAE;
OC GALLIFORMES.
RN [1]
RP SEQUENCE FROM N.A.
RA AIMS R.T., LI L., WEAVER B., HAWES S., HAHN E.A., QUIGLEY J.P.;
RL SUBMITTED (SEP-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL: AF004664; G2352473; -
DR PROSITE: PS00288; TIMP; 1.
KM SIGNAL.
FT CHAIN 1 26 POTENTIAL.
FT SIGNAL 27 220 TISSUE INHIBITOR OF METALLOPROTEINASE-2.
SQ SEQUENCE 220 AA; 24313 MW; F47B394 CRC32;
Query Match 77.8%; Score 1285; DB 12; Length 220;
Best Local Similarity 77.3%; Pred. No. 0.00e+00;
Matches 170; Conservative 25; Mismatches 22; Indels 3; Gaps 3;
Db 3 GALLUS GALLUS (CHICKEN).
QY 2 gaasapla-fcilllglpradacscspvhpqatcnadivlrakavkvedsgnd 60
Db 61 IYGNPKRIQYEVKQIKMFGPDIDIEFYIYAPSTEVCGOPIDTGKKEYLAGSEGD 120
QY 61 IYGNPKRIQYEVKQIKMFGPDIDIEFYIYAPSTEVCGOPIDTGKKEYLAGSEGD 120
Db 121 KMHITLCVLATWDSVSTQKSLNOROMGCEKISRLGIPCVSSDECLMTDMANE 180
QY 121 nmhltclcfivpwtclsatqkkslnhygmgeckitrcpmipcyisspdeclmndwvte 180
Db 181 KIVGROAKHYACIRSDGSCAWYRGMAPPKOEFIDIDP 220
QY 181 kninghgaakffacklrsdgscaawyrgaapkgelfidiedp 220
RESULT 3
ID 099727 PRELIMINARY; PRT; 224 AA.
AC 099727; (TREMBLER. 03, CREATED)
DT 01-MAY-1997 (TREMBLER. 03, LAST SEQUENCE UPDATE)
DT 01-MAY-1997 (TREMBLER. 03, LAST SEQUENCE UPDATE)
DE TISSUE INHIBITOR OF METALLOPROTEINASE 4.
GN HOMO SAPIENS (HUMAN).
OS EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
OC EUTHERIA; PRIMATES.
RN [1]
RP SEQUENCE FROM N.A.
RA GREENE J., WANG M., RAYMOND L.A., LIU Y.E., ROSEN C., SHI Y.E.;
RL SUBMITTED (JUN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL: U76456; G1773293; -
SQ SEQUENCE 224 AA; 25502 MW; EAF29A49 CRC32;
Query Match 49.5%; Score 817; DB 2; Length 224;
Best Local Similarity 45.1%; Pred. No. 4.20e-182;
Matches 102; Conservative 59; Mismatches 57; Indels 8; Gaps 6;
Db 1 MGSERPAP-SWVLLRLALRPGLGACSCAPAHPOOHICHSALVIRAKISSEKVP 59
QY 1 mgsaerpap-swvllrlalrpplgacscapahpoohichsalvirakissekvp 59
Db 60 ASADP-APTEKRLREIQIKMFKFEVXQVYITTFDSCGVKLEANSQROYLLTG 118
QY 60 asadp-aptelkrlreiqikmfkfevqxvqyittpfddscgvkleansoqroylltg 118
Db 57 sgndlygnpikriqyelkymfkpddg-dieflayapaavcgvsldigkkeylag 114
QY 57 sgndlygnpikriqyelkymfkpddg-dieflayapaavcgvsldigkkeylag 114

Db 119 OVLSDGVFHLICNVIEPWEDSLVORESLNHHYHLNCGOITTCYVPCISAPNECTW 178
QY 115 kaeggmhltclcfivpwtclsatqkkslnhygmgeckitrcpmipcyisspdeclm 174
Db 179 TWLLERLYGYQAOHYCKMKNVGTCSWYRGHLPLKREFYDIYQP 224
QY 175 mdvteknghgaakffacklrsdgscaawyrgaapkgelfidiedp 220
RESULT 4
ID 002722 PRELIMINARY; PRT; 207 AA.
AC 002722; (TREMBLER. 04, CREATED)
DT 01-JUL-1997 (TREMBLER. 04, LAST SEQUENCE UPDATE)
DT 01-JUL-1997 (TREMBLER. 04, LAST SEQUENCE UPDATE)
DE TISSUE INHIBITOR OF METALLOPROTEINASE-1.
GN TIME-1.
OS EQUUS CABALLUS (HORSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
OC EUTHERIA; PERISSODACTYLA.
RN [1]
RP SEQUENCE FROM N.A.
RA RICHARDSON D.W., DODGE G.R.;
RL SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL: U95039; G2072247; -
DR PROSITE: PS00288; TIMP; 1.
SQ SEQUENCE 207 AA; 23046 MW; 717AF434 CRC32;
Query Match 27.9%; Score 460; DB 4; Length 207;
Best Local Similarity 38.1%; Pred. No. 2.90e-87;
Matches 77; Conservative 44; Mismatches 66; Indels 15; Gaps 10;
Db 6 PLVSGILLMLTAPSRACVCPHPQAFCSSEFYIRANFVGTSV---NQT---TLQR 59
QY 9 plafcllllgllpradacscspvhpqatcnadivlrakavkvedsgndlygnpikr 68
Db 60 -RYELKTKFKFGKSGALGDADPTWYVTPMSESLCGTFHSENSEFLIAGOLL-DEKL 117
QY 69 lyeelktkfkfgksgalgdadptwvtpmseclcgtfhseenseflilagoll-dekl 117
Db 118 YITCSFVAPWNSLSAOROGFTKYAAGCEGCVFPCSSIPKLOSDDCICMTDOLLTG 177
QY 123 hltclcfivpwtclsatqkkslnhygmgeckitrcpmipcyisspdeclmndwvte 181
Db 178 SDKGFOSRYLACLPREPGLCTW 199
QY 182 nighgaakffacklrsdgscaaw 203
RESULT 5
ID P70533 PRELIMINARY; PRT; 176 AA.
AC P70533; (TREMBLER. 02, CREATED)
DT 01-FEB-1997 (TREMBLER. 02, LAST SEQUENCE UPDATE)
DT 01-FEB-1997 (TREMBLER. 02, LAST SEQUENCE UPDATE)
DE METALLOPROTEINASE INHIBITOR (FRAGMENT).
GN TIME-1.
OS RATTUS NORVEGICUS (RAT).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
OC EUTHERIA; RODENTIA.
RN [1]
RP SEQUENCE FROM N.A.
RA IREDALE J.P., BENSON R.C., ARTHUR M.J., FERRIS W.F., AICOLADO R.,
RA WINWOOD P.J., CLARK N., MURPHY G.;
RL HEPATOLOGY 24:176-184(1996).
DR EMBL: L29512; G1550734; -
FT NON_TER 1
SQ SEQUENCE 176 AA; 19659 MW; 7C8BA5D1 CRC32;
Query Match 27.6%; Score 455; DB 10; Length 176;

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RN [12]
RP SEQUENCE FROM N.A.
RC STRAIN-BRISTOL N2;
RA WU X, LE TT.;
RL SUBMITTED (APR-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [13]
RP SEQUENCE FROM N.A.
RC STRAIN-BRISTOL N2;
RA WATERSTON R.;
RL SUBMITTED (APR-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; U53336; G1255824;
SO SEQUENCE 158 AA; 17465 MW; FBD8E38D CRC32;

Query Match 12.9%; Score 213; DB 3; Length 158;
Best Local Similarity 28.7%; Pred. No. 5,02e-26;
Matches 37; Conservative 38; Mismatches 44; Indels 10; Gaps 8;

Db 4 LSLSTVLSVLAIVATLACKCEQSTKESFNAMHVSHTKRVGKGLPEGSEKRG--L 61
Oy 10 lafcllllglllpdadscspvtpgafcnad-iv-iraka-vnkkevsyndlygnpl 66
Db 62 NNLRTVQVHVEVFKPSNMTTLPDEIFTFSEAPAG--LTKAAGHEYLLAGRVEGPNALY 119
Oy 67 kridgylqklmqfkgp-dgd-1-eflytpaaacvysldlgkkeyllagkaeugnmh 123
Db 120 TVLCGGVLP 128
Oy 124 ltlcdilvp 132

RESULT 8
ID Q61720 PRELIMINARY; PRT; 38 AA.

AC Q61720;
DT 01-NOV-1996 (TREMBL,REL. 01, CREATED)
DT 01-NOV-1996 (TREMBL,REL. 01, LAST SEQUENCE UPDATE)
DT 01-FEB-1997 (TREMBL,REL. 02, LAST ANNOTATION UPDATE)
DE MESSENGER RNA FRAGMENT FOR MOUSE INTERPERON BETA (TYPE 1) CODING FOR
DE THE C-TERMINAL PART (FRAGMENT).
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAFOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
OC EUTHERIA; RODENTIA.
RN [1]
RP SEQUENCE FROM N.A.
RA MEDLINE; 82247191.
RA SKOP D., WINDASS J.D., SOR F.S., GEORGE H., WILLIAMS B.R.G.,
RA FUGUHARA H., DE MAEYER-GUIGNARD J., DE MAEYER E.,
RL NUCLEOTIC ACIDS RES. 10:3069-3084(1982).
DR EMBL; Y00755; G817965; -.
DR EMBL; J00425; G194118; -.
FT NON_TER 1
SQ SEQUENCE 38 AA; 4390 MW; 429816C2 CRC32;

Query Match 6.0%; Score 99; DB 10; Length 38;
Best Local Similarity 40.6%; Pred. No. 1.60e-02;
Matches 13; Conservative 7; Mismatches 11; Indels 1; Gaps 1;

Db 2 CLMTDOVLVGS-EDYOSRHFPACLPRLNGLCWTW 32
Oy 172 clmtdovlvgshgqafactlctsdgscaw 203

RESULT 9
ID Q40271 PRELIMINARY; PRT; 512 AA.

AC Q40271;
DT 01-NOV-1996 (TREMBL,REL. 01, CREATED)
DT 01-NOV-1996 (TREMBL,REL. 01, LAST SEQUENCE UPDATE)
DT 01-JAN-1998 (TREMBL,REL. 05, LAST ANNOTATION UPDATE)
DE MYO-INOSITOL-1-PHOSPHATE SYNTHASE.
DE MEMBRANETHENON CRYSTALLINUM (COMMON ICE PLANT).
DE EUKARYOTA; PLANTA; EMERIOPHITA; ANGIOSPERMAE; DICOTYLEDONEAE;
OC CAROPHYLLALES; ALIZOCEAE.

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RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 96208959.
RA ISHITANI M., MAJUMDER A.L., BORNHOUSER A., MICHALOWSKI C.B.,
RL JENSEN R.G., BOHNERT H.J.:
PLANT J. 9:537-548(1996).
EMBL; U32511; G975888;
SQ SEQUENCE 512 AA; 56758 MW; 8F97FE26 CRC32;

Query Match
Best Local Similarity 34.6%; Score 92; DB 8; Length 512;
Matches 18; Conservative 13; Mismatches 17; Indels 4; Gaps 3;

DB 275 EENIPFNGSPONTFVPGT-IDLAIKKNSLIGDDEFSQOTKMSVLYDFLV 325
OY 83 dgdleffytapaa-vegvaldldgkkeyllagka--egngnmhtlclftiv 131

RESULT 10
ID 048297 PRELIMINARY; PRT; 668 AA.

048297;
01-NOV-1996 (TREMBLREL. 01, CREATED)
DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
DE HISTIDINE KINASE.
GN CHEA.
OS HALOBACTERIUM SALINARIUM.
OC ARCHAEABACTERIA; EURYARCHAEOTA; HALOBACTERIALES; HALOBACTERIACEAE.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 95188871.
RA RUDOLPH J., OESTERHELT D.,
RL EMBL J. 14:667-673(1995).
DR EMBL; X82645; G671100;
SQ SEQUENCE 668 AA; 71931 MW; 3D4B7F92 CRC32;

Query Match
Best Local Similarity 5.6%; Score 92; DB 9; Length 668;
Matches 14; Conservative 9; Mismatches 12; Indels 1; Gaps 1;

OY 549 VESGGEYGPITVD-EISRMKSVKSVGDEEVITY 583
OY 55 vdsngndlygnpikrlyqelkqikmfxpddqdieftiv 90

RESULT 11
ID 039353 PRELIMINARY; PRT; 376 AA.

039353;
01-NOV-1996 (TREMBLREL. 01, CREATED)
DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
DE CELL WALL-PLASMA MEMBRANE LINKER PROTEIN.
GN PRP.
OS BRASSICA NAPUS (RAPE).
OC EUKARYOTA; PLANTA; EMBOPHYTA; ANGIOSPERMAE; DICOTYLEDONAE;
OC CAPRALES; CERICIFERAE.
RN [1]
RP SEQUENCE FROM N.A.
RX STRAIN-CV. COBRA;
RA GOODWIN W.G., PALLAS J.A., JENKINS G.I.;
RL SUBMITTED (JAN-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; X94976; E218269;
SQ SEQUENCE 376 AA; 38667 MW; FD5D37D0 CRC32;

Query Match
Best Local Similarity 5.5%; Score 91; DB 8; Length 376;
Matches 15; Conservative 10; Mismatches 7; Indels 2; Gaps 2;

DB 1 MGSITONLSFLI-LLILIG-FLAVSFACGCPPP 32
OY 1 mgaaarsiplatcillilgtlilpradacscspvp 34

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RESULT 12
ID 061259 PRELIMINARY; PRT; 113 AA.

061259;
01-NOV-1996 (TREMBLREL. 01, CREATED)
DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
DE 01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
DE ABELSON MURINE LEUKEMIA ONCOGENE (C-ABL TYPE II MRNA) (FRAGMENT).
GN ABL.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
OC EUTHERIA; RODENTIA.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 86133550.
RA BEN-NERIAH Y., BERNARDS A., PASKIND M., DALEY G.Q., BALTIMORE D.;
RL CELL 44:577-586(1986).
DR EMBL; M12263; G191561;
DR MGD; MGI:87859; ABL.
FT NON_TER 113
SQ SEQUENCE 113 AA; 12519 MW; 0393ACE7 CRC32;

Query Match
Best Local Similarity 5.4%; Score 89; DB 10; Length 113;
Matches 16; Conservative 8; Mismatches 13; Indels 1; Gaps 1;

DB 45 KENILAGPSENDPFLFVALYDFVAGDNTLSTKGEKL 82
OY 108 keylaagkaegnngmhtlclftivpd-tlsatqkksl 144

RESULT 13
ID 061260 PRELIMINARY; PRT; 114 AA.

061260;
01-NOV-1996 (TREMBLREL. 01, CREATED)
DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
DE 01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
DE ABELSON MURINE LEUKEMIA ONCOGENE (C-ABL TYPE III MRNA) (FRAGMENT).
GN ABL.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
OC EUTHERIA; RODENTIA.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 86133550.
RA BEN-NERIAH Y., BERNARDS A., PASKIND M., DALEY G.Q., BALTIMORE D.;
RL CELL 44:577-586(1986).
DR EMBL; M12264; G191563;
DR MGD; MGI:87859; ABL.
FT NON_TER 114
SQ SEQUENCE 114 AA; 12820 MW; 1CB4813E CRC32;

Query Match
Best Local Similarity 5.4%; Score 89; DB 10; Length 114;
Matches 16; Conservative 8; Mismatches 13; Indels 1; Gaps 1;

DB 46 KENILAGPSENDPFLFVALYDFVAGDNTLSTKGEKL 83
OY 108 keylaagkaegnngmhtlclftivpd-tlsatqkksl 144

RESULT 14
ID 013691 PRELIMINARY; PRT; 115 AA.

013691;
01-NOV-1996 (TREMBLREL. 01, CREATED)
DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
DE 01-NOV-1996 (TREMBLREL. 01, LAST ANNOTATION UPDATE)
DE ABL PROTEIN (FRAGMENT).
GN ABL.

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OS HOMO SAPIENS (HUMAN)
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
OC EUTHERIA; PRIMATES.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE: 85240529
RA SHITVEIMAN E., LIFSHTZ B., GALE R.P., CANANI E.;
RL NATURE 315:550-554(1985).
DR EMBL: M08833; G553164; -
FT NON_TER 115
SQ SEQUENCE 115 AA; 12628 MW; A9EB2733 CRC32;

Query Match
Best Local Similarity 42.1%; Score 89; DB 2; Length 119;
Matches 16; Conservative 8; Mismatches 13; Indels 1; Gaps 1;

DB 51 KENTLAGPSENDPNTLFVADYFVAGSDNTLSTIRGKSL 88
QY 108 keyllagkaegngnmhltlclfdlvpwd-cllsatqkksl 144

.SUPL 15
ID P97896 PRELIMINARY; PRT; 119 AA.

AC P97896;
DT 01-MAY-1997 (TREMBLREL. 03, CREATED)
DT 01-MAY-1997 (TREMBLREL. 03, LAST SEQUENCE UPDATE)
DT 01-JAN-1998 (TREMBLREL. 05, LAST ANNOTATION UPDATE)
DE ABELSON MURINE LEUKEMIA ONCOGENE (C-ABL PROTEIN) (FRAGMENT).
GN ABL.
OS MUS MUSCULUS (MOUSE)
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
OC EUTHERIA; RODENTIA.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE: 86133550.
RA BEN-NERIAH Y., BERNARDS A., PASKIND M., DALEY G.Q., BALTIMORE D.;
RL CELL 44:577-586(1986).
RN [2]
RP SEQUENCE OF 1-26 FROM N.A.
RC STRAIN-BALB/C; TISSUE-LIVER;
RX MEDLINE: 88202920.
RA BERNARDS A., PASKIND M., BALTIMORE D.;
RL ONCOGENE 2:297-304(1988).
DR EMBL: K03228; G191559; -
DR EMBL: X07539; G49838; -
DR EMBL: M12266; G553852; -
MGD; MGI:87859; ABL.
NON_TER 119
SQ SEQUENCE 119 AA; 13013 MW; 92DAB735 CRC32;

Query Match
Best Local Similarity 42.1%; Score 89; DB 10; Length 119;
Matches 16; Conservative 8; Mismatches 13; Indels 1; Gaps 1;

DB 51 KENTLAGPSENDPNTLFVADYFVAGSDNTLSTIRGKSL 88
QY 108 keyllagkaegngnmhltlclfdlvpwd-cllsatqkksl 144

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Search completed: Mon May 4 14:47:55 1998
Job time : 24 secs.

 MWSEELH (TM)

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Mpsrch_dp protein - protein database search, using Smith-Waterman algorithm
 on: Mon May 4 14:51:51 1998; Maspar time 9.10 Seconds
 361.220 Million cell updates/sec
 ular output not generated.

Title: >R07955
 Description: (1-220) from a-geneseq.dep
 Sequence: 1643
 1 mgaartlrlalglllall.....cawrygaappkqgfliedp 220

Scoring table:
 PAM 150
 Gap 11

Searched: 120837 seqs, 14945562 residues

Post-processing: Minimum Match 0%
 Listing first 45 summaries

Database:

a-geneseq31
 1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
 8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
 14:part14 15:part15 16:part16 17:part17 18:part18
 19:part19 20:part20 21:part21 22:part22 23:part23
 24:part24 25:part25 26:part26

Statistics: Mean 32.207; Variance 121.307; scale 0.265

Pred. No. is the number of results predicted by chance to have a
 score greater than or equal to the score of the result being printed,
 and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description	Pred. No.
1	1643	100.0	220	13	R65009 Human tissue inhibito	2.41e-169
2	1643	100.0	220	12	R62769 Human metalloproteinase	2.41e-169
3	1643	100.0	220	2	R07955 Human metalloproteinase	2.41e-169
4	1550	94.3	220	12	R62768 Bovine metalloproteinase	8.23e-159
5	1550	94.3	220	2	R07954 Bovine metalloproteinase	5.97e-148
6	1454	88.5	194	2	R06898 Complete sequence of	2.14e-141
7	1396	85.0	186	2	R06896 Part of TIMP-2 metallo	2.14e-141
8	1377	83.8	192	2	R06895 Metalloproteinase inh	2.99e-139
9	1337	81.4	177	2	R06897 Part of TIMP-2 metallo	9.82e-135
10	844	51.4	224	23	R25603 Tissue inhibitor of m	2.16e-79
11	842	51.2	224	18	R98265 Tissue inhibitor of m	3.61e-75
12	718	43.7	211	25	W30310 Human TIMP-3	2.16e-65
13	695	42.3	211	15	R84215 TIMP-3 clone-7 produc	7.60e-63
14	695	42.3	211	13	R72598 TIMP-3 metalloprotein	7.60e-63
15	687	41.8	206	13	R65014 Human tissue inhibitor	5.83e-62
16	686	41.8	212	13	R65002 Chicken tissue inhibi	7.52e-62
17	685	41.7	198	15	R84216 TIMP-3 clone-2 produc	9.70e-62
18	683	41.6	211	13	R65001 Mouse tissue inhibito	1.61e-61
19	672	40.9	188	25	W30308 Human TIMP-3	2.65e-60

RESULT	ID	Score	Query Match	Length	ID	Description	Pred. No.
20	637	38.8	184	13	R65000 Chicken inhibitor of	1.92e-56	
21	556	33.8	164	15	R84217 TIMP-3 HCM-3 clone pr	1.52e-47	
22	523	31.8	206	13	R65006 Rabbit tissue inhibi	6.12e-44	
23	521	31.7	207	3	R60592 Sequence of human p	1.01e-43	
24	521	31.7	207	3	R60275 Sequence of human p	1.01e-43	
25	521	31.7	207	3	R60786 Sequence of tissue in	1.01e-43	
26	521	31.7	207	25	W30309 Human TIMP-1	1.01e-43	
27	517	31.5	207	13	R65003 Cattle tissue inhibi	2.76e-43	
28	516	31.4	205	13	R60593 Sequence of a glibon	3.55e-43	
29	506	30.8	207	13	R65007 Mouse tissue inhibito	4.36e-42	
30	503	30.6	207	13	R65005 Human tissue inhibito	9.25e-42	
31	481	29.3	207	13	R65004 Pig tissue inhibitor	2.28e-39	
32	475	28.9	207	13	R65008 Mouse tissue inhibito	1.02e-38	
33	323	19.7	48	2	R06749 Peptide #1 for detect	1.92e-22	
34	219	13.3	28	9	R47010 Metalloproteinase inh	1.05e-11	
35	170	10.3	24	2	R06894 Peptide #3 for detect	7.20e-07	
36	157	9.6	19	9	R47011 Metalloproteinase inh	1.27e-05	
37	149	9.1	22	2	R10001 N-terminal sequence o	7.21e-05	
38	147	8.9	47	3	R60276 Immunogenic TIMP-2 pe	1.11e-04	
39	140	8.5	18	2	R06747 Tryptic digestion pro	6.17e-04	
40	139	8.5	23	2	R06750 Tissue inhibitor of m	9.44e-04	
41	137	8.3	18	2	R10002 Immunogenic TIMP-2 pe	3.35e-03	
42	131	8.0	18	13	R65011 Tryptic digestion pro	4.13e-03	
43	130	7.9	16	2	R06748 Immunogenic TIMP-2 pe	6.27e-03	
44	128	7.8	15	2	R10003 Tryptic digestion pro	6.27e-03	
45	118	7.2	20	6	R31183 N-terminal of monocyt	4.93e-02	

ALIGNMENTS

RESULT 1
 ID R65009 standard; Protein; 220 AA.
 AC R65009:
 DT 24-OCT-1995 (first entry)
 DE Human tissue inhibitor of metalloproteinase (TIMP-2).
 KW Tissue inhibitor of metalloproteinase; diagnostic; therapeutic;
 RN phylylaxis.
 OS Homo sapiens.
 PN W09505478-A.
 PD 23-FEB-1995.
 PF 12-AUG-1994; U09188.
 PR 12-AUG-1993; US-105263.
 PR 13-DEC-1993; US-167463.
 PA (REGC) UNIV CALIFORNIA.
 PI Hawkes SP, Kishnani NS, Yang T;
 WP1: 95-098775/13.
 PT New human tissue inhibitor of metalloproteinase-3 - used to
 develop prods. for diagnosis, therapy or prophylaxis of
 PT conditions with unwanted matrix metalloproteinase activity.
 PS Disclosure: Fig 6A-B: 87pp: English.
 CC The protein sequence of human TIMP-2 is compared with the cattle,
 CC pig, human, rabbit and mouse TIMP-1, mouse and cattle TIMP-2, and
 CC chicken (Ch) and mouse TIMP-3. A probe based on the ChIMP-3
 CC amino acid sequence (R65000) is used to isolate DNA encoding
 CC human TIMP-3 from a human cDNA library. Human TIMP-3 can be used
 CC for the diagnosis, therapy or prophylaxis of conditions
 CC characterized by excess or unwanted matrix metalloproteinase
 CC activity, e.g. neoplasias, tumor metastasis, inflammatory
 CC disorders such as rheumatoid arthritis, ulcerations, reaction
 CC to infection, periodontal disease or osteoporosis. It can also
 CC be used in drug screening/diagn.
 SQ Sequence 220 AA:
 Query Match 100.0%; Score 1643; DB 13; Length 220;
 Best Local Similarity 100.0%; Pred. No. 2.41e-169;
 Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

DB 1 mgaartlrlalglllallrlpadacscspvhpqafndvrlravskewsgnd 60
 |||||||
 OY 1 mgaartlrlalglllallrlpadacscspvhpqafndvrlravskewsgnd 60
 |||||||
 DB 61 lgnqikrtqyelkikmfpkqekdefiytappssavcgsldvggkkeylragkaedg 120
 |||||||

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QY 61 tynpnlkrltqyelkqkmlfkypkexdiefiytapsavcgsldvgygkkeyllagkaegd 120
DB 121 kmhltdcfivpwtlcttqkkslnhrygmqcecklttrcmipcyisspdeclmndwvte 180
QY 121 kmhltdcfivpwtlcttqkkslnhrygmqcecklttrcmipcyisspdeclmndwvte 180
DB 181 knlnghqakffacikrdsdcawyrqaapkgelfldedp 220
QY 181 knlnghqakffacikrdsdcawyrqaapkgelfldedp 220

RESULT 2
ID R62769 standard; Protein: 220 AA.
AC R62769;
DT 13-JUL-1995 (first entry)
DE Human metalloproteinase inhibitor.
KW Metalloproteinase inhibitor; tumour cell dissemination;
KM rheumatoid arthritis; dystrophic epidermolysis bullosa;
KW emphysema; osteoporosis; MI gene disorders.
OS Homo sapiens.
Key Location/Qualifiers
peptide 1..26
/label= sig_peptide

EP-623676-A.
PD 09-NOV-1994.
PF 18-MAY-1990; 305433.
PR 19-MAY-1989; US-355027.
PR 29-MAR-1990; US-501904.
PA (AMGE-) AMGEN INC.
PI (CHIL-) CHILDRENS HOSPITAL LOS ANGELES.
PI Boone TC, Declerck YA, Langley KE;
DR WPI; 94-343309/43.
DR N-PSDB; Q73088.
PT New metalloproteinase inhibitor, analogues and DNA - for
PT treating tumour cell dissemination, rheumatoid arthritis and for
PT large-scale recombinant inhibitor prodn.
CC Claim 8; Fig 2; 63pp; English.
CC 073088 encodes R62769 human metalloproteinase inhibitor (MI), it
CC may be used to inhibit tumour cell dissemination and for treating
CC rheumatoid arthritis, dystrophic epidermolysis bullosa, emphysema
CC and osteoporosis. The DNA may be used to detect MI gene disorders.
SQ Sequence 220 AA;

Query Match 100.0%; Score 1643; DB 12; Length 220;
Best Local Similarity 100.0%; Pred. No. 2.41e-169;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 mgsaartlrlalqlllactllrpdadscspvhpqgafcnadvlrakavsekevdsnd 60
|||||
1 mgsaartlrlalqlllactllrpdadscspvhpqgafcnadvlrakavsekevdsnd 60
DB 61 tynpnlkrltqyelkqkmlfkypkexdiefiytapsavcgsldvgygkkeyllagkaegd 120
QY 61 tynpnlkrltqyelkqkmlfkypkexdiefiytapsavcgsldvgygkkeyllagkaegd 120
DB 121 kmhltdcfivpwtlcttqkkslnhrygmqcecklttrcmipcyisspdeclmndwvte 180
QY 121 kmhltdcfivpwtlcttqkkslnhrygmqcecklttrcmipcyisspdeclmndwvte 180
DB 181 knlnghqakffacikrdsdcawyrqaapkgelfldedp 220
QY 181 knlnghqakffacikrdsdcawyrqaapkgelfldedp 220

RESULT 3
ID R07955 standard; protein: 220 AA.
AC R07955;
DT 21-FEB-1991 (first entry)
DE Human metalloproteinase inhibitor gene product.
KW Tumour; chemotherapy; cancer; Paget's disease; osteoporosis;
KW scleroderma; cholestatoma.
OS Homo sapiens.
Key Location/Qualifiers
```

```
FT protein 27..220
PD EP-398753-A.
PD 22-NOV-1990.
PF 18-MAY-1990; 305433.
PR 19-MAY-1989; US-355027.
PR 29-MAR-1990; US-501904.
PA (AMGE-) AMGEN INC.
PI (CHIL-) CHILDRENS HOSPITAL OF LA.
PI Langley KE, Boone TC, Declerck YA;
DR WPI; 90-350481/47.
DR N-PSDB; Q06584.
PT New metalloproteinase inhibitor polypeptide(s) - and DNA
PT encoding them, for treatment of tumour cell dissemination and
PT rheumatoid arthritis
PS Claim 12; Fig 2; 63pp; English.
CC The product has therapeutic use in inhibiting tumour dissemination
CC during chemotherapy and radiation therapy, impugned bone marrow cell
CC harvesting etc. The inhibitor may also be useful in encapsulating
CC tumours aiding clean excision, and in treatment of emphysema, Paget's
CC disease, osteoporosis, scleroderma and bedsores.
CC The gene product also has application in autoimmune disorders eg.
CC rheumatoid arthritis and multiple sclerosis.
CC See also Q06583.
SQ Sequence 220 AA;

Query Match 100.0%; Score 1643; DB 2; Length 220;
Best Local Similarity 100.0%; Pred. No. 2.41e-169;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 mgsaartlrlalqlllactllrpdadscspvhpqgafcnadvlrakavsekevdsnd 60
|||||
1 mgsaartlrlalqlllactllrpdadscspvhpqgafcnadvlrakavsekevdsnd 60
QY 61 tynpnlkrltqyelkqkmlfkypkexdiefiytapsavcgsldvgygkkeyllagkaegd 120
QY 61 tynpnlkrltqyelkqkmlfkypkexdiefiytapsavcgsldvgygkkeyllagkaegd 120
DB 121 kmhltdcfivpwtlcttqkkslnhrygmqcecklttrcmipcyisspdeclmndwvte 180
QY 121 kmhltdcfivpwtlcttqkkslnhrygmqcecklttrcmipcyisspdeclmndwvte 180
DB 181 knlnghqakffacikrdsdcawyrqaapkgelfldedp 220
QY 181 knlnghqakffacikrdsdcawyrqaapkgelfldedp 220

RESULT 4
ID R62768 standard; Protein: 220 AA.
AC R62768;
DT 13-JUL-1995 (first entry)
DE Bovine metalloproteinase inhibitor
KW Metalloproteinase inhibitor; tumour cell dissemination;
KW rheumatoid arthritis; dystrophic epidermolysis bullosa;
KW emphysema; osteoporosis; MI gene disorders.
OS Bos taurus.
Key Location/Qualifiers
peptide 1..26
/label= sig_peptide

EP-623676-A.
PD 09-NOV-1994.
PF 18-MAY-1990; 305433.
PR 19-MAY-1989; US-355027.
PR 29-MAR-1990; US-501904.
PA (AMGE-) AMGEN INC.
PI (CHIL-) CHILDRENS HOSPITAL LOS ANGELES.
PI Boone TC, Declerck YA, Langley KE;
DR WPI; 94-343309/43.
DR N-PSDB; Q73087.
PT New metalloproteinase inhibitor, analogues and DNA - for
PT treating tumour cell dissemination, rheumatoid arthritis and for
PT large-scale recombinant inhibitor prodn.
CC Claim 12; Fig 1; 65pp; English.
CC 073087 encodes R62768 bovine metalloproteinase inhibitor (MI), it
```


Qy 104 vqgkkey1agkaegdgmhltlclcdflvwpdltstctqkxslnhrygmqceckltlrcpmlp 163

Dd 121 cyisspdeclmmdwvteknlnghqakffacklkrzsdscawyrgaappkgelfldelp 177

Qy 164 cyisspdeclmmdwvteknlnghqakffacklkrzsdscawyrgaappkgelfldelp 220

TT	domain	/note- "Domain characteristic of TIMPs"
PN	US5643752-A.	
PT	01-JUL-1997.	47..51
PD	18-JAN-1996.	
PF	18-JAN-1996; 588163.	
PR	18-JAN-1996; US-588163.	
PA	(INCY-) INCYTE PHARM INC.	
PI	Hawkins PR, Murry LE;	
DR	WPI: 97-350238/32.	
NR	N-PSDB: T80986.	
PT	DNA encoding a tissue inhibitor of metalloproteinase(s), TIMP-4	
PT	for production of recombinant protein for treating tumours,	
PT	arthritis, etc., and for contraception	
PS	Claim 1; Fig 1; 24pp: English.	
CC	This sequence is a tissue inhibitor of metalloproteinases designated	
CC	TIMP-4. The cDNA clone was identified with incyte Clone No. 589345.	
CC	TIMP-4 can be used to treat disorders associated with excessive	
CC	metalloproteinase expression, e.g. tumour metastasis, angiogenesis and	
CC	growth, osteoarthritis, osteoporosis, pulmonary emphysema, periodontal	
CC	disease and rheumatoid arthritis, and for contraception. TIMP-4 cDNA	
CC	can be used for gene therapy of such disorders and in diagnostic assays	
CC	for TIMP-4 mRNA in cells and tissues. Oligonucleotide fragments of the	
CC	TIMP-4 cDNA and antagonists or inhibitors of TIMP-4 can be used to treat	
CC	disorders associated with over-expression of TIMP-4, e.g. to promote	
CC	healing of corneal and diabetic ulcers and ulcers/lesions caused by	
CC	microorganisms. Antibodies to TIMP-4 can be used to diagnose such	
CC	ulcers or lesions.	
CC	Sequence 224 AA;	

ID	R98265	standard; Protein; 224 AA.
AC	R98265;	
DT	09-OCT-1996	(first entry)
DE	Tissue inhibitor of metalloproteinase-4 (TIMP-4).	
KW	Tissue inhibitor of metalloproteinase-4; TIMP-4; cancer; arthritis;	
KW	bone resorption; Paget disease; hyperparathyroidism;	
KW	cholesteatoma; therapy.	
OS	Homo sapiens.	
FT	Key	Location/Qualifiers
FT	peptide	1..29
FT	/label=	Sig-peptide
FT	protein	30..224
FT	/label=	Mat-protein
FN	W09618725-A1.	
PD	20-JUN-1996.	
PF	13-DEC-1994; U14498.	
PR	13-DEC-1994; WO-U14498.	
PA	(HUMA-) HUMAN GENOME SCI INC.	
FL	Greene JM, Rosen CA;	
DR	WPI; 96-300644/30.	
DR	N-PSDB; T34433.	
PT	DNA encoding human tissue inhibitor of metalloproteinase-4 (TIMP-4)	
PT	- useful to treat, e.g. cancer, arthritic diseases, bone resorption	
PT	diseases, etc.	
PS	Claim 14; Fig 1; 49pp; English.	
CC	Human tissue inhibitor of metalloproteinase-4 (R98265)	
CC	is a novel member of the TIMP family. Its amino acid sequence was	
CC	deduced from a cDNA clone (T34433) Obtd. from an early stage	
CC	human brain. The sequence shows 48% identity to human TIMP-2.	
CC	Recombinant TIMP-4 can be expressed in e.g. E. coli, COS or insect	
CC	cell hosts. It can be used to treat patients in need of TIMP-4	
CC	(e.g. cancer, arthritic diseases, bone resorption diseases, Paget's	
CC	disease, hyperparathyroidism and cholesteatoma), and to screen for	
CC	antagonists useful for treating patients in need of TIMP-4 inhibition	
CC	(e.g. for tissue repair and remodeling). It can also be used in	
CC	diagnostic processes.	
CC	Sequence 224 AA;	

OY 123 htlcldflvpwclstltqkkslnhygmgeckltcrpmipcyisspdeclmndwvtekn 182
 DB 174 ypgyqskhyacrlqkgyswrygwappdkslnatdp 211
 OY 183 lngdqakftaclkrdsqscawrygaappkqefldiedp 220

RESULT 15

ID R65014 standard; Protein: 206 AA.

AC R65014;

DT 24-OCT-1995 (first entry)

DE Human tissue inhibitor of metalloproteinase (TIMP-3).

KW Tissue inhibitor of metalloproteinase; diagnostic; therapeutic;
prophylaxis.

OS Homo sapiens.

PN W09505478-A.

PD 23-FEB-1995.

PF 12-AUG-1994; 009188.

12-AUG-1993; US-105263.

13-DEC-1993; US-167463.

(RECC) UNTV CALIFORNIA.

PI Hawkes SP, Krishnan NS, Yang T;

DR WPI; 95-09875/13.

DR N-PSDB; Q82747.

PI New human tissue inhibitor of metallo:proteinase-3 - used to
develop prods. for diagnosis, therapy or prophylaxis of

PI conditions with unwanted matrix metallo:proteinase activity.

PS Disclosure: Fig 11: 87pp; English.

CC Human TIMP-3 can be used for the diagnosis, therapy or

CC prophylaxis of conditions characterized by excess or unwanted

CC matrix metalloproteinase activity, e.g. neoplasias, tumor

CC metastasis, inflammatory disorders such as rheumatoid arthritis,

CC ulcerations, reaction to infection, periodontal disease or

CC osteoporosis. It can also be used in drug screening/design.

SQ Sequence 206 AA;

Query Match 41.8%; Score 687; DB 13; Length 206;

Best Local Similarity 43.9%; Pred. No. 5,83e-62;

Matches 93; Conservative 54; Mismatches 53; Indels 12; Gaps 10;

DB 3 gyllgswwjgdwgaactspshpdaafcsndivirakvvgkklvkegp--fgt-l--v-v-56
 OY 13 gylllla-tll-tpadacscspvhpqgafcnadvirakavsekevsgndiygnpikrlq 70
 DB 57 ytlkqmkmyrgftkmpbhvgyintaseslqglklewn-kyqylltgryv-dgkmytcqlcn 114
 71 yeikqikmkfkg-pek-dieftylapsavcgsldvgykkeyliagkaegdgkmhltlcd 128
 DB 115 fyerwqlslsqrglnryhyhgcncklksyylpctfvtskneclwtmdlnsfygyqgs 174
 OY 129 flvpwclstltqkkslnhygmgeckltcrpmipcyisspdeclmndwvteknlngha 188
 DB 175 khyaclrqkgyswrygwappdkslnatdp 206
 OY 189 kftaclkrdsqscawrygaappkqefldiedp 220

Search completed: Mon May 4 14:52:17 1998
 Job time : 26 secs.

(TM)

J.J.: Partidge, N.C.
#journal Arch. Biochem. Biophys. (1994) 311:313-320
#title Cloning and regulation of rat tissue inhibitor of metalloproteinases-2 in osteoblastic cells.
#accession S45683
##molecule_type mRNA
##residues 1-220 ##label COO

REFERENCE
#authors Rosvilt, W.T.; McCourt, D.W.; Partidge, N.C.; Jeffrey, J.J.
#journal Arch. Biochem. Biophys. (1992) 292:402-410
#title Purification and sequence analysis of two rat tissue inhibitors of metalloproteinases.
#cross-references MIMD:92117648
#accession S20325
##molecule_type protein
##residues 27-48 ##label ROS

REFERENCE
#authors Gibbons, K.L.; O'Grady, R.L.; Piper, A.A.
#submission submitted to the EMBL Data Library, June 1995
#description Rat tissue inhibitor of metalloproteinases-2: cDNA cloning and sequence analysis.
#accession S60160
##status Preliminary
##molecule_type mRNA
##residues 1-6,'S',8-20,'V',22-152,'E',154-220 ##label GIB
##cross-references EMBL:L31884

GENETICS
#gene TIMP-2
#FUNCTION regulation of extracellular matrix remodeling by inhibition of matrix metalloproteinases: TIMP-1 and TIMP-2 complex specifically with progelatinase B and progelatinase A, respectively, possibly controlling their activation; TIMP-1 and TIMP-2 possess erythroid potentiating activity
#superfamily metalloproteinase inhibitor
#erythropoiesis: extracellular matrix; metalloproteinase inhibitor; mitogen

FEATURE
1-26 #domain signal sequence #status predicted #label SIG
27-220 #product metalloproteinase inhibitor 2 #status predicted #label MAT

27-98,29-127,
39-152,154-201,
159-164,172-193
SUMMARY #length 220 #molecular_weight 24369 #checksum 6329

Query Match 99.2%; Score 1630; DB 2; Length 220;
Best Local Similarity 98.2%; Pred. No. 0.00e+00;
Matches 216; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 1 MGAARTLRALGLLTLRPADACSPVHPQAFQCMNDVIRARAVSEKVDGND 60
QY 1 mgsaaarclrlalglilllcllrlpadacscspvhpqafcnadviraravsekevdsnd 60

Db 61 IYGNPIKRIQYIKOIKMFKGPKDIEFIYTPASSAVGVSIDVGKKEYLAGRAEDG 120
QY 61 IYGNPIKRIQYIKOIKMFKGPKDIEFIYTPASSAVGVSIDVGKKEYLAGRAEDG 120

Db 121 KMHITLCDFIYPMWDLSTOKSLNHRROMGCKITRCPMIPCTISSPDECIAMDWYTE 180
QY 121 kmhltlclfiypwdlslstqkkslnhrygmgeckitrcpmipcyisspdeciamdwyte 180

Db 181 KSIINGQAKFPACIRSDGSCAMYGAAAPKQEFIDIEP 220
QY 181 knisngqakffackirsdgscawyrgaaapkgelfidiep 220

RESULT 4 JH0683 #type complete

TITLE metalloproteinase inhibitor 2 precursor - mouseALTERNATE_NAMES TIMP-2;
ORGANISM #formal_name Mus musculus #common_name house mouse
DATE 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change

08-Sep-1997
ACCESSIONS JH0683; JCI234; S18428; S15987; S26189
REFERENCE JH0683
#authors Shimizu, S.; Malik, K.; Sejima, H.; Kishi, J.; Hayakawa, T.; Koizumi, O.
#journal Gene (1992) 114:291-292
#title Cloning and sequencing of the cDNA encoding a mouse tissue inhibitor of metalloproteinase-2.
#cross-references MIMD:92290292
#accession JH0683
##molecule_type mRNA
##residues 1-220 ##label SHI
##cross-references EMBL:X62622; NID:954801; PID:954802
##experimental_source 3T3 fibroblast, strain Balb/c

REFERENCE
#authors Leco, K.J.; Hayden, L.J.; Sharma, R.R.; Rocheleau, H.; Greenberg, A.H.; Edwards, D.R.
#journal Gene (1992) 117:209-217
#title Differential regulation of TIMP-1 and TIMP-2 mRNA expression in normal and Ha-ras-transformed murine fibroblasts.
#cross-references MIMD:92347695
#accession JCI234
##molecule_type mRNA
##residues 1-11,'H',13-20,'L',22-194,'E',196-220 ##label LEC
##cross-references GB:M93954; NID:9202053; PID:9202054

REFERENCE
#authors Kishi, J.
#journal Matrix (1991) 11:373
#title Correction.
#cross-references MIMD:92244125
#accession S18428
##molecule_type protein

REFERENCE
#residues S15987
#authors Kishi, J.I.; Ogawa, K.; Yamamoto, S.; Hayakawa, T.
#journal Matrix (1991) 11:10-16
#title Purification and characterization of a new tissue inhibitor of metalloproteinases (TIMP-2) from mouse colon 26 tumor cells.
#cross-references MIMD:91226375
#accession S15987
##molecule_type protein
##residues 27-46,'HX',50-52,'LX',55-56,'DX',60,'X',62 ##label K12
##note this sequence has been revised in reference S18428

FUNCTION #description regulation of extracellular matrix remodeling by inhibition of matrix metalloproteinases: TIMP-1 and TIMP-2 complex specifically with progelatinase B and progelatinase A, respectively, possibly controlling their activation; TIMP-1 and TIMP-2 possess erythroid potentiating activity
#superfamily metalloproteinase inhibitor
#erythropoiesis: extracellular matrix; metalloproteinase inhibitor; mitogen

CLASSIFICATION
KEYWORDS

FEATURE
1-26 #domain signal sequence #status predicted #label SIG
27-220 #product metalloproteinase inhibitor 2 #status predicted #label MAT

27-98,29-127,
39-152,154-201,
159-164,172-193
SUMMARY #length 220 #molecular_weight 24328 #checksum 6045

Query Match 98.6%; Score 1620; DB 2; Length 220;
Best Local Similarity 97.3%; Pred. No. 0.00e+00;
Matches 214; Conservative 5; Mismatches 1; Indels 0; Gaps 0;

Db 1 MGAARSRLALGLLTLASIVRPADACSPVHPQAFQCMNDVIRARAVSEKVDGND 60
QY 1 mgsaaarclrlalglilllcllrlpadacscspvhpqafcnadviraravsekevdsnd 60

Db 61 IYGNPIKRIQYIKOIKMFKGPKDIEFIYTPASSAVGVSIDVGKKEYLAGRAEDG 120
QY 61 IYGNPIKRIQYIKOIKMFKGPKDIEFIYTPASSAVGVSIDVGKKEYLAGRAEDG 120


```
#label MAT\
```

122 HRYMGCECKITRCPMPICYISSPDECLMDWTETKSINGHQAKFACIKRSDGSCAWR 181

|||||
OY 146 hrygmgeckltirpmipcyispsdeclwmdwvteknlnghaktfacktsdgscaayr 205
DB 182 GAAPKQEFIDIEDP 196
OY 206 gaappkqefldiedp 220
RESULT 7 S45317 #type complete
ENTRY
TITLE metalloproteinase inhibitor 3 precursor - humanALTERNATE_NAMES mig-5 F
ORGANISM 3
DATE #formal_name Homo sapiens #common_name man
06-Jan-1995 #sequence_revision 12-Apr-1996 #text_change
05-Sep-1997
ACCESSIONS S45317; S59515; S53870; I38023; A49614; C56937; I53025;
S47041
REFERENCE S45317
#authors Urie, J.A.; Ferrando, A.A.; Velasco, G.; Fretje, J.M.P.;
Lopez-Otin, C.
#journal Cancer Res. (1994) 54:2091-2094
#title Structure and expression in breast tumors of human TIMP-3, a
new member of the metalloproteinase inhibitor family.
#accession S45317
#molecule_type mRNA
#residues 1-211 #label URI
#cross-references EMBL:X76227; NID:g495251; PID:g495252
#experimental_source breast tumor CDNA library
REFERENCE S59515
#authors Silbiger, S.M.; Jacobsen, V.L.; Cupples, R.L.; Koski, R.A.
#journal Gene (1994) 141:293-297
#title Cloning of cDNAs encoding human TIMP-3, a novel member of the
tissue inhibitor of metalloproteinase family.
#accession S59515
#status preliminary
#molecule_type mRNA
#residues 1-211 #label STL
#cross-references EMBL:002571; NID:g472309; PID:g472310
REFERENCE S53870
#authors Kishanani, N.S.; Staskus, P.W.; Yang, T.T.; Mastarz, F.R.;
Hawkes, S.P.
#journal Matrix Biol. (1994) 14:479-488
#title Identification and characterization of human tissue inhibitor
of metalloproteinase-3 and detection of three additional
metalloproteinase inhibitor activities in extracellular
matrix.
#accession S53870
#molecule_type protein
#residues 'X',25,'XX',28,'X',30-35,'X',37,'X',39-41 #label KIS
REFERENCE I38023
#authors Wick, M.; Buerger, C.; Brueselbach, S.; Lucibello, F.C.;
Mueller, R.
#journal J. Biol. Chem. (1994) 269:18953-18960
#title A novel member of human tissue inhibitor of
metalloproteinases (TIMP) gene family is regulated during
G1 progression, mitogenic stimulation, differentiation, and
senescence.
#cross-references MUID:94308155
#accession I38023
#molecule_type mRNA
#residues 1-15,'W',17,'T',20-21,'PR',24-201,'X',203-211 #label
RES
#cross-references EMBL:Z30183; NID:g520931; PID:g520932
#experimental_source fibroblast cell line WI-38
REFERENCE A49614
#authors Apté, S.S.; Mattei, M.G.; Olsen, B.R.
#journal Genomics (1994) 19:86-90
#title Cloning of the cDNA encoding human tissue inhibitor of
metalloproteinases-3 (TIMP-3) and mapping of the TIMP3 gene
to chromosome 22.
#accession A49614
#molecule_type mRNA

##residues 14-20,'R',23-211 #label APT
##cross-references GB:U15078; NID:g407034; PID:g407035
##experimental_source placenta CDNA library
REFERENCE A56937
#authors Apté, S.S.; Olsen, B.R.; Murphy, G.
#journal J. Biol. Chem. (1995) 270:14313-14318
#title The gene structure of tissue inhibitor of metalloproteinases
(TIMP)-3 and its inhibitory activities define the distinct
TIMP gene family.
#accession C56937
#molecule_type protein
#residues 'X',25,'X',27-35,'X',37 #label AP2
REFERENCE I53025
#authors Wilde, C.G.; Hawkins, P.R.; Coleman, R.T.; Levine, W.B.;
Delegane, A.M.; Okamoto, P.M.; Ito, L.Y.; Scott, R.W.;
Seilhamer, J.J.
#journal DNA Cell Biol. (1994) 13:711-718
#title Cloning and characterization of human tissue inhibitor of
metalloproteinases-3.
#cross-references MUID:95290091
#accession I53025
#status translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1-211 #label RE2
#cross-references GB:S78453; NID:g998825; PID:g998826
GENETICS
#gene GDB:TIMP3
#cross-references GDB:138175; OMIM:188826
#map_position 22q12.1-22q13.2
FUNCTION
#description regulation of extracellular matrix remodeling by inhibition
of matrix metalloproteinases
#note transcription induced by cytokines, tumor promoters, and
anti-inflammatory agents
#note TIMP-1 and TIMP-3 have distinct but overlapping
tissue-specific expression patterns
#superfamily metalloproteinase inhibitor
#extracellular matrix; metalloproteinase inhibitor
CLASSIFICATION
KEYWORDS #domain signal sequence #status predicted #label SIG\
FEATURE 1-23 #product metalloproteinase inhibitor 3 #status
24-211 experimental #label MAT\
24-91,26-118,
36-143,145-192,
150-155,163-184
SUMMARY #length 211 #molecular_weight 24145 #checksum 4550
Query Match 42.3%; Score 695; DB 1; length 211;
Best Local Similarity 43.6%; Pred. No. 5,016-122;
Matches 95; Conservative 56; Mismatches 55; Indels 12; Gaps 10;
DB 2 TPWGLVILGWSWSIGDGAECATCSPSPHODAFQNSDVIIRAKVVGKRLVEGP--FGT 59
OY 7 lrlalglilla-ll-lpadacscspvhpqafnadavlrakvsekevdsgndiygn 64
DB 60 -L--V-YTIKMKATRGTKMPHOYITFEASESCIGKLEVN-RYQTLTGKRV-DGKM 113
OY 65 plkrqyeikqikmfky-pek-dieflitapsavcysldagkykeyliagkaegdkm 122
DB 114 YTGICNFERWDQTLISQKGINRYHLCGNCKIKSCYTILOFVSKNECLMTDLNSNG 173
OY 123 htlcditvpdcflstlqkshlnhygmgeckltirpmipcyispsdeclwmdwvtekn 182
DB 174 YPGYOSKHAYACIRQKGYCSWYRGWAPDKSITINATDP 211
OY 183 lngnqaktfacktsdgscaayrgaappkqefldiedp 220
RESULT 8 A53532 #type complete
ENTRY
TITLE metalloproteinase inhibitor 3 precursor - mouseALTERNATE_NAMES TIMP
ORGANISM #formal_name Mus musculus #common_name house mouse

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DATE
27-Jun-1994 #sequence_revision 12-Apr-1996 #text_change

ACCESSIONS
05-Sep-1997
A53532; S43053; A56937; B56937; I53108; S43052
A53532

#authors
Ieco, K.J.; Khokha, R.; Pavloff, N.; Hawkes, S.P.; Edwards,
D.R.

#journal
J. Biol. Chem. (1994) 269:9352-9360

#title
Tissue inhibitor of metalloproteinases-3 (TIMP-3) is an
extracellular matrix-associated protein with a distinctive
pattern of expression in mouse cells and tissues.

#accession
#molecule_type mRNA
#residues 1-211 ##label LRC
#cross-references GB:U27424; NID:G4339881; PID:G4339882
#note not glycosylated when expressed by monkey kidney COS-1
cells

REFERENCE
S43053
Sun, Y.; Hegamyer, G.; Colburn, N.H.
Cancer Res. (1994) 54:1139-1144
Molecular cloning of five messenger RNAs differentially
expressed in preneoplastic or neoplastic JB6 mouse
epidermal cells: one is homologous to human tissue
inhibitor of metalloproteinases-3.

#accession
#status S43053
#molecule_type mRNA
#residues 14-211 ##label S02
#cross-references EMBL:Z30970

REFERENCE
A56937
Apte, S.S.; Olsen, B.R.; Murphy, G.
J. Biol. Chem. (1995) 270:14313-14318
The gene structure of tissue inhibitor of metalloproteinases
(TIMP)-3 and its inhibitory activities define the distinct
TIMP gene family.

#accession
#molecule_type mRNA: DNA
#residues A56937
#cross-references GB:U26434; GB:U26435; GB:U26436; GB:U26437;
NID:G1167532; PID:G1167534

REFERENCE
#accession
#molecule_type protein
#residues B56937
#note a soluble recombinant form is N-glycosylated

#journal
I53108
Apte, S.S.; Hayashi, K.; Seldin, M.F.; Mattei, M.G.; Hayashi,
M.; Olsen, B.R.
Dev. Dyn. (1994) 200:117-197
Gene encoding a novel murine tissue inhibitor of
metalloproteinases (TIMP), TIMP-3, is expressed in
developing mouse epichella, cartilage, and muscle, and is
located on mouse chromosome 10.

#cross-references MIM:95036582

#accession
#status I53108
#molecule_type mRNA
#residues 1-211 ##label RES
#cross-references GB:U19622; NID:G4338810; PID:G4338811.

GENETICS
#gene timp3
#map_position 10
#introns 41/1; 68/3; 106/1; 146/3

FUNCTION
#description regulation of extracellular matrix remodeling by inhibition
of matrix metalloproteinases
transcription induced by cytokines, tumor promoters, and
anti-inflammatory agents
TIMP-1 and TIMP-3 have distinct but overlapping
tissue-specific expression patterns
#superfamily metalloproteinase inhibitor
extracellular matrix; metalloproteinase inhibitor

CLASSIFICATION
KEYWORDS
FEATURE
#domain signal sequence #status predicted #label SIG\

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[illegible]

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FEATURE
1-24      #domain signal sequence #status predicted #label SIG
25-212    #product metalloproteinase inhibitor 3 #status
          experimental #label MAT\
25-92,27-119,
37-144,146-193,
151-156,164-185
208
SUMMARY
#length 212 #molecular-weight 24504 #checksum 6267

Query Match
Best Local Similarity 45.2%; Score 686; DB 1; Length 212;
Matches 90; Conservative 49; Mismatches 50; Indels 10; Gaps 8;

Db 22 AEACTCPVIRHODAFCSNDIYIRAKVGKILMKDGP--FGT-M-R--YTVMKKMYRQFO 75
QY 24 adacscspvhpqgafcnadvirakavsekevsgndiygnipkrilqykxikmfk-p 82
       76 IMPHQVITYTESSESIGCVKLTVN-KYQYLITGRVY-EGKYVTGICMNYEKMKDRLTSLRS 133
       83 ek-delietyltaqvssvecvslavgkkeyllagkaegqkmiltcditlpdclstcqk 141
Db 134 KGLNRHYHAGCGCKIRPCRYLYLPCFATSKNECIWTDMLSNFSGSHQAQRACIQREVCYC 193
QY 142 kslnhrygmgececkltlrpmjpcyispsdeclwmdvwteknlnghqakfackkrdsdc 201
Db 194 SWTRGMAPPDKTIINATDP 212
QY 202 awyrqaappkgelfidcqp 220

RESULT 10 JC4630 #type complete
ENTRY
TITLE metalloproteinase tissue inhibitor 3 - ratALTERNATE_NAMES TIMP-3; tiss
ORGANISM [formal_name Rattus norvegicus] #common_name Norway rat
DATE 10-Apr-1996 #sequence_revision 24-May-1996 #text_change
REFERENCES JC4630
AUTHORS Wu, I.; Moses, M.A.
JOURNAL Gene (1996) 168:243-246
TITLE Cloning and expression of the cDNA encoding rat tissue
inhibitor of metalloproteinase 3 (TIMP-3).
accession JC4630
#molecule_type mRNA
#residues 1-211 #label WT1
#crosso-references GB:U27201; NID:g971205; PID:g971206
COMMENT This protein is a matrix-bound glycoprotein, that is a member of
the tissue inhibitor of metalloproteinase family and
down-regulates matrix metalloproteinase activity.
GENETICS
#gene TIMP-3
CLASSIFICATION #superfamily metalloproteinase inhibitor
KEYWORDS extracellular matrix; glycoprotein; metalloproteinase
inhibitor
FEATURE
1-23      #domain signal sequence #status predicted #label SIG\
24-211    #product metalloproteinase tissue inhibitor 3 #status
207       #predicted #label MAT\
         #binding_site carbohydrate (Asn) (covalent) #status
         predicted
SUMMARY
#length 211 #molecular-weight 24226 #checksum 5198

Query Match
Best Local Similarity 42.7%; Score 680; DB 2; Length 211;
Matches 93; Conservative 56; Mismatches 57; Indels 12; Gaps 10;

Db 2 TFWLGIVLVLSWMSLGHMTACTCSPSHPODAFCNSDIYIRAKVYGKTLVEKP--FGT 59
1 : :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: :: ::
7 ttrialgillla-tl-lrpdadccspvhpqgafcnadvirakavsekevsgndiygn 64

```

D	b	-L--V-PTIKOMKRRFSSCPHVOYHTFPASSLGAKLEVN-KYOYLITGRV-EGKA	113
O	y	65 pikriqelqikmifgy-pek-dteffiletpssavcgvslidvgkkeyllagkaeogdkm	122
D	b	114 YTGICNFVERMDHLFTISQRGLNTRHLCGNCKIKSCVYPCFVTSKKECLWMTDMSNGF	173
O	y	123 hltcdftfipwdtstctgkslnhygmgscecklitrmpciyspsdeclmwdwvtekn	182
D	b	174 YPGOSKHVACINRGKGCGSMRYGMAPPDKSINADNP	211
O	y	183 lngnqakflacikrdsdcawrygaappkqelfdiiep	220
R	E	S	T
E	N	T	R
JC4303	#type complete		
T	I	T	L
D	A	T	E
M	A	T	R
16-Nov-1995	#sequence revision 08-Feb-1996	#text change	
08-Sep-1997			
JC4303			
JC4303			
JC4303			
F	a	u	t
Forough, R.; Nikkarl, S.T.; Hasenstab, D.; Lea, H.; Clowes,			
A.W.			
Gene (1995) 163:267-271			
Cloning and characterization of a cDNA encoding the baboon			
tissue inhibitor of matrix metalloproteinase-1 (TIMP-1).			
#accession JC4303			
#molecule_type mRNA			
#residues 1-207 ##label FOR			
#cross-references GB:LJ7295; NID:g561545; PID:g561546			
#experimental_source smooth muscle cell			
This protein, a member of the tissue inhibitor of matrix			
metalloproteinase family, is a secreted glycoprotein which			
functions through formation of a 1:1 complex with matrix			
metalloproteinase and influences the proteinase activity. It has			
a role as a physiological molecule for limiting vascular smooth			
muscle cell proliferation and migration after arterial injury.			
GENETICS			
gene			
CLASSIFICATION			
KEYWORDS			
FEATURE			
53,101			
SUMMARY			
Query Match			
Best Local Similarity 41.1%; Pred. No. 3,30e-84;			
Matches 81; Conservative 39; Mismatches 70; Indels 7; Gaps 7;			
7 LASGITLLMTIARSRACTCVPHROTAFNCSDVIYIAKFQGFPEVNOTT-LYOREYEIKM			
10 lalglilllaclilpadadscspvhpgafcnadvirakavsekevsgndiyn-pikr			
66 TK-MTKGFOL-GDAADRIVTYTPAMESVCGYEHRSHNRSEELIACKLO-DGLLIHTTC			
69 lqyelkqlkmekjpekdiefilytapssavgvsldvgkke-yllaagkaegdgymhlitlc			
123 SFVAPMNLSLAQRGRFKTTVGCECTYRPPCLSIPOCKLOSCHICMTDQLLOGSKEGF			
128 dftlypwdtstctgkslnhygmgsce-clitrmpciyspsdeclmwdwvteknlngh			
183 OSRHLCAPREPGLCTW			
187 gaktfacikrdsdcaw			
203			
R	E	S	T
E	N	T	R
zyROEP	#type complete		
metallopoteinase tissue inhibitor 1 precursor - humanALTERNATE_NAME			

ORGANISM #inhibitor: tissue inhibitor of metalloproteinases (TIMP-1)
 DATE #formal_name Homo sapiens #common_name man
 28-May-1986 #sequence_revision 28-May-1986 #text_change
 20-Mar-1998

ACCESSIONS A93372: A93363: A23534: A20595: A35826: A48417: S20318:
 S15872: I52912: S66461: A01269

REFERENCE
 #authors Dochterly, A.J.P.; Lyons, A.; Smith, B.J.; Wright, E.M.;
 Stephens, P.E.; Harris, T.J.R.; Murphy, G.; Reynolds, J.J.
 #journal Nature (1985) 318:66-69
 #title Sequence of human tissue inhibitor of metalloproteinases and
 its identity to erythroid-potentiating activity.
 #cross-references M01D:86040463
 #accession A93372
 ##molecule_type mRNA
 ##residues 1-207 ##label DOC
 ##cross-references GB:X03124: NID:937182: PID:937183

REFERENCE
 #authors Gasson, J.C.; Golde, D.W.; Kaufman, S.E.; Westbrook, C.A.;
 Hewick, R.M.; Kaufman, R.J.; Wong, G.G.; Temple, P.A.;
 Leary, A.C.; Brown, E.L.; Orr, E.C.; Clark, S.C.
 #journal Nature (1985) 315:768-771
 #title Molecular characterization and expression of the gene
 encoding human erythroid-potentiating activity.
 #cross-references M01D:85240567
 #accession A93363
 ##molecule_type mRNA
 ##residues 1-207 ##label GAS

REFERENCE
 #authors Carnicha, D.F.; Sommer, A.; Thompson, R.C.; Anderson, D.C.;
 Smith, C.G.; Welgus, H.G.; Stricklin, G.P.
 #journal Proc. Natl. Acad. Sci. U.S.A. (1986) 83:2407-2411
 #title Primary structure and cDNA cloning of human fibroblast
 collagenase inhibitor.
 #cross-references M01D:86205964
 #accession A23534
 ##molecule_type mRNA
 ##residues 1-207 ##label CAR
 ##cross-references GB:M12670: NID:9182482: PID:9182483
 ##note parts of this sequence were confirmed by protein
 sequencing

REFERENCE
 ##note A20595
 #authors Stricklin, G.P.; Welgus, H.G.
 #journal J. Biol. Chem. (1983) 258:12252-12258
 #title Human skin fibroblast collagenase inhibitor.
 #cross-references M01D:84032401
 #accession A20595
 ##molecule_type protein
 ##residues 24-44,'L',46 ##label STR
 ##note six disulfide bonds are present

REFERENCE
 #authors Rapp, G.; Freudenstein, J.; Klaudiny, J.; Mucha, J.; Wempe,
 F.; Zimmer, M.; Scheit, K.H.
 #journal DNA Cell Biol. (1990) 9:479-485
 #title Characterization of three abundant mRNAs from human ovarian
 granulosa cells.
 #cross-references M01D:91025550
 #accession A35826
 ##molecule_type mRNA
 ##residues 1-207 ##label RAP
 ##cross-references GB:M8188

REFERENCE
 #authors Van Raust, M.; Norga, K.; Masure, S.; Proost, P.;
 Vandekerckhove, F.; Auwerx, J.; Van Damme, J.; Opdenakker,
 G.
 #journal Cytokine (1991) 3:231-239
 #title The cytokine-protease connection: identification of a 96-kD
 TIMP-1 gelatinase and regulation by interleukin-1 and
 cytokine inducers.
 #cross-references M01D:91355647
 #accession A48417
 ##molecule_type protein

##residues 'X',25,'X',27-35,'X',37-52 ##label VAN
 ##experimental_source monocytic cell line TIMP-1
 ##note sequence modified after extraction from NCBI backbone
 ##note sequence incorrectly identified as 96k gelatinase

REFERENCE
 #authors Osthus, A.; Knauper, V.; Oberhoff, R.; Reinke, H.;
 Tschesche, H.
 #journal FEBS Lett. (1992) 296:16-20
 #title Isolation and characterization of tissue inhibitors of
 metalloproteinases (TIMP-1 and TIMP-2) from human
 rheumatoid synovial fluid.
 #cross-references M01D:92111776
 #accession S20318
 ##molecule_type protein
 ##residues 'X',25,'X',27-35,'X',37-38 ##label OST
 ##experimental_source rheumatoid synovial fluid

REFERENCE
 #authors Opdenakker, G.; Masure, S.; Proost, P.; Billiau, A.; van
 Damme, J.
 #journal FEBS Lett. (1991) 284:73-78
 #title Natural human monocyte gelatinase and its inhibitor.
 #cross-references M01D:91285112
 #accession S15872
 ##molecule_type protein
 ##residues 'X',25,'X',27-35,'X',37-42,'X',44,'X',46,'X',48-51
 ##label FEB
 ##experimental_source peripheral blood monocytes

REFERENCE
 #authors Williamson, R.A.; Marston, F.A.O.; Angal, S.; Koklitis, P.;
 Panico, M.; Morris, H.R.; Carne, A.F.; Smith, B.J.; Harris,
 T.J.R.; Freedman, R.B.
 #journal Biochem. J. (1990) 268:267-274
 #title Disulphide bond assignment in human tissue inhibitor of
 metalloproteinases (TIMP).
 #note annotation: disulfide bonds
 152912

REFERENCE
 #contents
 #authors Opbroek, A.; Kenney, M.C.; Brown, D.
 #journal Curr. Eye Res. (1993) 12:877-883
 #title Characterization of a human corneal metalloproteinase
 inhibitor (TIMP-1).
 152912

##accession
 ##status translated from GB/EMBL/DBJ
 ##molecule_type mRNA
 ##residues 1-207 ##label RES
 ##cross-references GB:S68252: NID:9545022

REFERENCE
 #authors Triebel, S.; Blaaser, J.; Gote, T.; Pelz, G.; Schueren, E.;
 Schmitt, M.; Tschesche, H.
 #journal Eur. J. Biochem. (1995) 231:714-719
 #title Evidence for the tissue inhibitor of metalloproteinases-1
 (TIMP-1) in human polymorphonuclear leukocytes.
 S66461

##accession
 ##molecule_type protein
 ##residues 24-38 ##label TRI
 ##experimental_source polymorphonuclear leukocytes

COMMENT This protein, found in a variety of body fluids, complexes with
 metalloproteinases, irreversibly inactivating them. It also
 mediates erythropoiesis in vitro; but, unlike IL-3, it is
 species-specific, stimulating the growth and differentiation of
 only human and murine erythroid progenitors.
 The remarkable heat stability of this protein may be due to
 disulfide bond formation.

GENETICS
 #gene GDB:TIMP1; CIGI: TIMP
 ##cross-references GDB:119615: OMIM:305370

CLASSIFICATION
 #map_position XP11.3-XP11.23
 #superfamily metalloproteinase inhibitor
 #erythropoiesis; glycoprotein; metalloproteinase inhibitor;
 mitogen

FEATURE
 1-23 #domain signal sequence #status predicted #label SIG\

24-207 #product metalloproteinase inhibitor 1 #status
 experimental #label MAT\

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(TM)

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Msrch_pp protein - protein database search, using Smith-Waterman algorithm

Mon on: Mon May 4 14:51:04 1998; Maspar time 15.16 Seconds

ular output not generated. 610.953 Million cell updates/sec

Title: >R07955
Description: (1-220) from a-geneseq.pep
Perfect Score: 1643
Sequence: 1 mgsaartlialgljllatl.....cavyrgapkgelfdiedp 220

Scoring table: PAM 150
Gap 11

Searched: 140555 seqs, 42109429 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database:

1:sp_fungi 2:sp_human 3:sp_invertebrate 4:sp_mammal
5:sp_mhc 6:sp_organelle 7:sp_phase 8:sp_plant
9:sp_bacteria 10:sp_rodent 11:sp_virus 12:sp_vertebrate
13:sp_unclassified

Statistics: Mean 43.550; Variance 66.095; scale 0.659

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description	Pred. No.
1	1466	89.2	196	10	060453	TISSUE INHIBITOR OF ME 0.00e+00
2	1333	79.9	220	12	042146	TISSUE INHIBITOR OF ME 0.00e+00
3	844	51.4	224	2	099727	TISSUE INHIBITOR OF ME 4.37e-190
4	474	28.8	207	4	002722	TISSUE INHIBITOR OF ME 3.95e-91
5	448	27.3	176	10	P70533	METALLOPROTEINASE INHI 2.25e-84
6	306	18.6	50	2	016121	TISSUE INHIBITOR OF ME 2.70e-48
7	208	12.7	158	3	021265	SIMILAR TO METALLOPROT 7.32e-25
8	100	6.1	383	10	062779	PREADIPOCYTE FACTOR 1.12e-02
9	100	6.1	384	9	056365	THERMOSTABLE ALKALINE 1.24e-02
10	99	6.0	38	10	061720	MESSENGER RNA FRAGMENT 1.82e-02
11	99	6.0	325	4	095117	FRZB PRECURSOR. 1.82e-02
12	96	5.8	141	10	061692	HSA-C GENE CODING FOR 5.72e-02
13	95	5.8	512	8	040271	MYO-INOSITOL-1-PHOSPHA 8.35e-02
14	95	5.8	954	12	091909	C-KIT-RELATED KINASE 1 5.25e-01
15	90	5.5	226	11	041968	TEGMENT PROTEIN. 5.25e-01
16	90	5.5	289	9	028420	HYPOTHETICAL 32.9 KD P 5.25e-01
17	90	5.5	323	10	P97401	SECRETED FRIZZLED-RELA 5.25e-01
18	90	5.5	325	2	092765	FRZB PRECURSOR. 5.25e-01
19	90	5.5	325	2	099686	FRIZZLED. 5.25e-01
20	90	5.5	325	2	000181	FRITZ. 5.25e-01

21	90	5.5	668	9	048297	HISTIDINE KINASE. 5.25e-01
22	89	5.4	113	10	061259	ABELSON MURINE LEUKEMI 7.51e-01
23	89	5.4	114	10	061260	ABELSON MURINE LEUKEMI 7.51e-01
24	89	5.4	115	2	013691	ABL PROTEIN (FRAGMENT) 7.51e-01
25	89	5.4	119	10	P97896	ABELSON MURINE LEUKEMI 7.51e-01
26	89	5.4	119	2	013915	C-ABL (FRAGMENT). 7.51e-01
27	89	5.4	138	10	061261	ABELSON MURINE LEUKEMI 7.51e-01
28	89	5.4	144	2	013848	BCR/C-ABL ONCOGENE PRO 7.51e-01
29	89	5.4	156	2	014020	BCR/C-ABL ONCOGENE PRO 7.51e-01
30	89	5.4	164	2	013690	HYPOTHETICAL PROTEIN (7.51e-01
31	89	5.4	181	10	061253	C-ABL PROTEIN, TYPE II 7.51e-01
32	89	5.4	182	10	061255	C-ABL PROTEIN, TYPE II 7.51e-01
33	89	5.4	187	10	061254	C-ABL PROTEIN, TYPE I 7.51e-01
34	89	5.4	206	10	061252	C-ABL PROTEIN, TYPE IV 7.51e-01
35	89	5.4	284	2	013692	BCR/ABL TRANSFERASE. 1.07e+00
36	88	5.4	337	9	034234	SUGAR PHOSPHATASE. 1.07e+00
37	88	5.4	365	7	037993	MAJOR HEAD PROTEIN. 1.07e+00
38	88	5.4	385	10	062208	STROMAL CELL DERIVED P 1.07e+00
39	88	5.4	583	9	030411	POTATIVE ABC-TRANSPORT 1.07e+00
40	89	5.4	1130	2	013870	PROTO-ONCOGENE TYROSIN 7.51e-01
41	89	5.4	1149	2	013869	PROTO-ONCOGENE TYROSIN 7.51e-01
42	87	5.3	433	3	023275	SIMILAR TO S. CEREVISI 1.52e+00
43	87	5.3	640	10	009182	INTERGRIN BETA-7 SUBUNI 1.52e+00
44	87	5.3	895	12	091227	GLUTAMATE RECEPTOR SUB 1.52e+00
45	87	5.3	895	12	091225	GLUTAMATE RECEPTOR SUB 1.52e+00

ALIGNMENTS

RESULT 1	ID	060453	PRELIMINARY:	PRT:	196 AA.
AC	060453:				
DT	01-NOV-1996 (TREMUREL. 01, CREATED)				
DT	01-NOV-1996 (TREMUREL. 01, LAST SEQUENCE UPDATE)				
DT	01-JAN-1998 (TREMUREL. 03, LAST ANNOTATION UPDATE)				
DE	TISSUE INHIBITOR OF METABO PROTEINASE (FRAGMENT)				
OS	CRICETULUS LONGICAUDATUS (LONG-TAILED HAMSTER).				
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;				
CC	EURHERIA; RODENTIA.				
RN	[1]				
RP	SEQUENCE FROM N.A.				
RA	SUZUKI Y.;				
RL	SUBMITTED (NOV-1993) TO EMBL/GENBANK/DBJ DATA BANKS.				
DR	EMBL: X75924; G414877; .				
DR	PROSITE: P500288; TIMP; 1.				
FT	NON_TER	1			
FT	CHAIN	3	196		POTENTIAL.
SQ	SEQUENCE	196 AA; 21941 MW; 2DE3230A CRC32;			

Query Match	Score	1466:	DB 10:	Length	196:
Best Local Similarity	99.08:	Pred. No.	0.00e+00:		
Matches	193:	Conservative	2:	Mismatches	0:
				Indels	0:
				Gaps	0:
DB	2	ACSCSPVHPOQAFNADYVIRAKAVSEKEVDGNDIYGNPIKRIQYETIKQIMFGKPPKD	61		
QY	26	acscspvhpqgafcnadvirakavsekevdgndiynpikriyqetkqimfgypek	85		
DB	62	IEFTYAPSSAVGVSLDVGKREYILAGKABGDKRMHTTLCDFIVPMDTISTOKKSLN	121		
QY	86	ieftypassavgvslavgkreyilagkabgdkrmhtttcdffivpmdtisttqkksln	145		
DB	122	HRVQGCCEKTRCMICVYSSPECLMDVMYTKSINGHAKRFACIKRSDGCAVWR	181		
QY	146	hrvqgccktrcmicpylsspsclmvdvteknngakrfackrdsqscavwr	205		
DB	182	GAAPKQEFIDEDP	196		
QY	206	gaapkgelfdiedp	220		
RESULT 2					
ID	042146	PRELIMINARY:	PRT:	220 AA.	

[illegible]

```

RN [2] SEQUENCE FROM N.A.
RP STRAIN-BRISTOL N2;
RC WU X, LE TT.;
RA SUBMITTED (APR-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [3]
RP SEQUENCE FROM N.A.
RC STRAIN-BRISTOL N2;
RA WATERSTON R.;
RL SUBMITTED (APR-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; U53366; G1255824; -
SQ SEQUENCE 158 AA; 17465 MW; FBD8E38D CRC32;

Query Match 12.7%; Score 208; DB 3; Length 158;
Best Local Similarity 27.9%; Pred. No. 7.32e-25;
Matches 36; Conservative 40; Mismatches 43; Indels 10; Gaps 9;

Db 4 LSLIVTSVIVATYATLACKCRESTKESFCNAHWVSHVKVVRGKGLPEGSERK--L 61
OY 10 LALHILLIATLIPRDCSCSPVHPGAFCHAD-VV-IRAKA-VSEKEVSGNDLYNP 66
OY 67 KRIYGEIKQIMKFGP-EKD-I-EFLYTPASSAVCSYSLDYGKEYLLAGKAEQDKM 123
Db 120 TVLGGQVLP 128
OY 124 ILLCDIAP 132

RESULT 8 PRELIMINARY; PRT; 383 AA.
ID Q62779

AC Q62779;
DT 01-NOV-1996 (TREMBL,REL. 01, CREATED)
DT 01-NOV-1996 (TREMBL,REL. 01, LAST SEQUENCE UPDATE)
DT 01-NOV-1996 (TREMBL,REL. 01, LAST ANNOTATION UPDATE)
DE PRADPOCTE FACTOR 1.
OS RATTUS NORVEGICUS (RAT).
OC EDUAROTI; METAQOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
OC EUTHERIA; RODENTIA.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN-WISTAR; TISSUE-ISLETS OF LANGERHANS;
RA SVENSSON C., MICHELSEN B., BILLESTRUP N., NIELSEN J.H.;
RL SUBMITTED (MAY-1995) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; U25680; G802014; -
SQ SEQUENCE 383 AA; 41253 MW; 58BDE3DD CRC32;

Query Match 6.1%; Score 100; DB 10; Length 383;
Best Local Similarity 42.6%; Pred. No. 1.24e-02;
Matches 20; Conservative 11; Mismatches 12; Indels 4; Gaps 4;

Db 1 MARGALLRV-L-LLLA-FGHSTYGAECDPACDPQGFCGCAADVCR 44
OY 1 MYGAARLIRLIGILLIATLIPRDCSCSPV-HPGAFCHADVLR 46

RESULT 9 PRELIMINARY; PRT; 384 AA.
ID Q56365

AC Q56365;
DT 01-NOV-1996 (TREMBL,REL. 01, CREATED)
DT 01-FEB-1997 (TREMBL,REL. 02, LAST SEQUENCE UPDATE)
DT 01-JAN-1998 (TREMBL,REL. 05, LAST ANNOTATION UPDATE)
DE THERMOSTABLE ALKALINE PROTEASE.
OS THERMOACTINOMYCES SP.
OC EUBACTERIA; FIRMICUTES; ACTINOMYCETES; THERMOACTINOMYCETES;
OC THERMOACTINOMYCES.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN-E79;
RA LEE J.K., KIM Y.O., KIM H.K., PARK Y.S., OH T.K.;
```


Db 275 EENIPFINGSFONTFVGL-IDLAIKNSLIGDDFKSGQTRMSVLYDFLY 325
Qy 83 ekdieflytapssa-vcgvsldvggkkeyllagka-egdgkmhltldcf 131

Search completed: Mon May 4 14:51:34 1998
Job time : 30 secs.

RESULT 14
ID 091909 PRELIMINARY; PRT; 954 AA.

AC 091909;
DT 01-NOV-1996 (TREMBLEREL. 01, CREATED)
DT 01-NOV-1996 (TREMBLEREL. 01, LAST SEQUENCE UPDATE)
DT 01-JAN-1998 (TREMBLEREL. 05, LAST ANNOTATION UPDATE)
DE C-KIT-RELATED KINASE 1 (KKRK1) PRECURSOR (KKRK1).
OS XENOPUS LAEVIS (AFRICAN CLAMED FROG).
OC EURAROTIA; METAEOA; CHORDATA; VERTEBRATA; TETRAPODA; AMPHIBIA; ANURA.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 95344996.
RA BAKER C.V., SHARPE C.R., TORPEY N.P., HEASMAN J., WYLIE C.C.;
MECH. DEV. 50:217-228(1995).
EMBL; Z48770; G763034;
PROSITE; PS00240; RECEPTOR_TYR_KIN_III; 1.
AW SIGNAL.
FT SIGNAL. 1 19 POTENTIAL.
FT CHAIN 20 954 C-KIT-RELATED KINASE 1.
SQ SEQUENCE 954 AA; 106859 MW; 3B301EB3 CRC32;

Query Match 5.8%; Score 95; DB 12; Length 954;
Best Local Similarity 31.7%; Pred. No. 8.35e-02;
Matches 20; Conservative 17; Mismatches 22; Indels 4; Gaps 4;

Db 367 ELHLIRL-KGTREKGVYFTTNSDDASVFNIOVTRPEILIAERT-SEGTLQCVATGF 424
Qy 72 elkgkkmkqpkedieflytapssavcgvsldvgk-k-eyllagkaegdgkmhltldcf 129

Db 425 PVP 427
Qy 130 lvp 132

RESULT 15
ID 041968 PRELIMINARY; PRT; 226 AA.

AC 041968;
DT 01-JAN-1998 (TREMBLEREL. 05, CREATED)
DT 01-JAN-1998 (TREMBLEREL. 05, LAST SEQUENCE UPDATE)
DT 01-JAN-1998 (TREMBLEREL. 05, LAST ANNOTATION UPDATE)
TEGUMENT PROTEIN.
GAMMAHV. ORF67.
MURINE HERPESVIRUS 68.
OC VIRUSES; DSDNA VIRUSES, NO RNA STAGE; HERPESVIRIDAE; GAMMAHERPESVIRINAE.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN-WDMS;
RX MEDLINE; 97366649.
RA VIRGIN H.W. IV, LATREILLE P., WAMSLEY P., HALLSWORTH K., WECK R.E.,
DAL CANTO A.J., SPECK S.H.;
RL J. VIROL. 71:5894-5904(1997).
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN-WDMS;
RA LATREILLE P., WAMSLEY P., WATERSTON R.H.;
RL SUBMITTED (APR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; U97553; G2317997;
SQ SEQUENCE 226 AA; 25881 MW; D2ADA3E8 CRC32;

Query Match 5.5%; Score 90; DB 11; Length 226;
Best Local Similarity 35.7%; Pred. No. 5.25e-01;
Matches 10; Conservative 8; Mismatches 10; Indels 0; Gaps 0;

Db 92 LKCEMSPPRIDFOYGNRVNMACDVNLE 119
Qy 76 lkmfkgpkedieflytapssavcgvsld 103

May 4 14:55:38 1998

R07955.ISP

OSTHUES A., KNAUPER V., OBERHOFF R., REINKE H., TSCHESCHE H.;
FEBS LETT. 296:16-20(1992).
[8]
STRUCTURE BY NMR OF 27-153.
WILLIAMSON R.A., MARTORELL G., CARR M.D., MORPHY G., DOCHERTY A.J.P.,
MEDLINE: 95001893.
FREDMAN R.B., FEENEY J.;
BIOCHEMISTRY 33:11745-11759(1994).
-1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)
AND IRREVERSIBLY INACTIVATE THEM.
-1- PPM: THE ACTIVITY OF TIMP-2 IS DEPENDENT ON THE PRESENCE OF
DISULFIDE BONDS.
-1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
EMBL: J05593; G33707; -
EMBL: S48568; G298202; -
EMBL: U44385; G1517893; JOINED.
EMBL: U44381; G1517893; JOINED.
EMBL: U44382; G1517893; JOINED.
EMBL: U44383; G1517893; JOINED.
EMBL: M32304; G307195; -
EMBL: X54533; G37181; -
PIR: A34415; A34415.
PIR: A34464; A34464.
PIR: B35996; B35996.
PIR: A37128; A37128.
PIR: S20319; S20319.
MIM: 188825; -
PROSITE: PS00288; TIMP. 1.
METALLOPROTEINASE INHIBITOR; SIGNAL.
SIGNAL. 1 26
CHAIN 27 220
DISULFID 29 98
DISULFID 29 127
DISULFID 39 152
DISULFID 154 201
DISULFID 172 193
DISULFID 159 164
CONFLICT 17 19
CONFLICT 78 78
CONFLICT 82 82
CONFLICT 96 96
CONFLICT 101 101
CONFLICT 118 118
CONFLICT 122 122
CONFLICT 150 150
CONFLICT 175 175
SEQUENCE 220 AA; 24399 MW; 834D259A CRC32;
Jery Match 100.0%; Score 1643; DB 1; Length 220;
Best Local Similarity 100.0%; Pred. No. 0.00e+00; Indels 0; Gaps 0;
Matches 220; Conservative 0; Mismatches 0;
DB 1 MGAARTLALGLLLATLRLPADACSPVHPQAFQCNADVIRAKAVSEKVDGND 60
QY 1 mgaartlrlalglalllatllrpacscspvhpqafcnadvirakavsekevdsnd 60
DB 1 IYGNPIKRIQYEIKQIKMKGPDKDIEFYITAPSSAVGSLDVGKREYLITAGRAEGD 120
QY 1 ygnpikriqyeikqikmkgpdkdiefyitapssavgslavgkkeyllagkaegds 120
DB 1 KMITTLCDFVPMDLSTTOKSLINRYQMGCECKITRCMICYISSPDECLMDWTE 180
QY 1 kmittlclfdvpmdlsttstokslinryqmgceckitrcmipcyisspdeclmmdwte 180
DB 121 KMITTLCDFVPMDLSTTOKSLINRYQMGCECKITRCMICYISSPDECLMDWTE 180
QY 121 kmittlclfdvpmdlsttstokslinryqmgceckitrcmipcyisspdeclmmdwte 180
DB 181 KNIHQAKFFACIKRSDGSCAWRGAPROFLIEDP 220
QY 181 knihqakffackikrsgdscawrygaappqefliledp 220
RESULT 2 STANDARD: PRT: 220 AA.
ID AC P30121;
DT 01-APR-1993 (REL. 25, CREATED)

01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
DE METALLOPROTEINASE INHIBITOR 2 PRECURSOR (TIMP-2) (TISSUE INHIBITOR OF
DE METALLOPROTEINASES-2).
GN TIMP2 OR TIMP-2.
OC RATUUS NORVEGICUS (RAT).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
OC EUTHERIA; RODENTIA.
[1]
RN SEQUENCE FROM N.A.
RP STRAIN-SPRAGUE-DAWLEY; TISSUE-BONE;
RC MEDLINE: 94263207.
RX MEDLINE: 94263207.
RA COOK T.F., BURKE J.S., BERGMAN K.D., QUINN C.O., JEFFREY J.J.,
RA PARTIDGE N.C.;
RL ARCH. BIOCHEM. BIOPHYS. 311:313-320(1994).
[2]
RN SEQUENCE FROM N.A.
RP TISSUE-MAMMARY;
RC GIBBONS K.L., O'GRADY R.L., PIPER A.A.;
RL SUBMITTED (JUN-1995) TO EMBL/GENBANK/DBJ DATA BANKS.
[3]
RN SEQUENCE FROM N.A.
RP MEDLINE: 94326839.
RX SANTORO M., BATTIGLIA C., ZHANG L., CARLOMAGNO F., MARTELLI M.L.,
RA SALVATORE D., FUSCO A.;
RL EXP. CELL RES. 213:398-403(1994).
[4]
RN SEQUENCE FROM N.A.
RP TISSUE-TESTIS;
RC MEDLINE: 96384329.
RX GRIMA J., CALCAGNO K., CHENG C.Y.;
RL J. ANDROL. 17:263-275(1996).
[5]
RN SEQUENCE OF 27-48.
RP MEDLINE: 92117648.
RX ROSMIT W.T., MCCOY D.W., PARTIDGE N.C., JEFFREY J.J.;
RL ARCH. BIOCHEM. BIOPHYS. 292:402-410(1992).
-1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)
AND IRREVERSIBLY INACTIVATE THEM.
-1- PPM: THE ACTIVITY OF TIMP-2 IS DEPENDENT ON THE PRESENCE OF
DISULFIDE BONDS.
-1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
EMBL: U14526; G540205; -
EMBL: L31884; G1141730; -
EMBL: S72594; G619233; -
EMBL: S82718; G1881814; -
PIR: S20325; S20325.
PROSITE: PS00288; TIMP. 1.
METALLOPROTEINASE INHIBITOR; SIGNAL.
KMW METALLOPROTEINASE INHIBITOR; SIGNAL.
FT SIGNAL. 1 26
FT CHAIN 27 220
FT DISULFID 27 98
FT DISULFID 29 127
FT DISULFID 39 152
FT DISULFID 154 201
FT DISULFID 172 193
FT DISULFID 159 164
FT DISULFID 153 153
FT CONFLICT 153 153
SEQUENCE 220 AA; 24356 MW; 222FE8DA CRC32;
Query Match 99.2%; Score 1630; DB 1; Length 220;
Best Local Similarity 98.2%; Pred. No. 0.00e+00; Indels 0; Gaps 0;
Matches 216; Conservative 3; Mismatches 1;
DB 1 MGAARTLALGLLLATLRLPADACSPVHPQAFQCNADVIRAKAVSEKVDGND 60
QY 1 mgaartlrlalglalllatllrpacscspvhpqafcnadvirakavsekevdsnd 60
DB 1 IYGNPIKRIQYEIKQIKMKGPDKDIEFYITAPSSAVGSLDVGKREYLITAGRAEGD 120
QY 1 ygnpikriqyeikqikmkgpdkdiefyitapssavgslavgkkeyllagkaegds 120

Db 121 KMHITLDFIVPMDTISTOKKSLNRYOMGCECKITRCPCMIICYSPECEIAMDWTE 180
 121 kmhltcdflvpmdtistctqkslnhryomgceckitrcpcmiicyspdeclmndwte 180
 Oy 121 KMHITLDFIVPMDTISTOKKSLNRYOMGCECKITRCPCMIICYSPECEIAMDWTE 180
 121 kmhltcdflvpmdtistctqkslnhryomgceckitrcpcmiicyspdeclmndwte 180
 Db 181 KSIHQAKFPACIKRSDGSCAWYRGAAPKOEFLIEDP 220
 181 ksinhgaakfpaclkrsgdscawyrsgaapkefledp 220
 Oy 181 KSIHQAKFPACIKRSDGSCAWYRGAAPKOEFLIEDP 220
 181 ksinhgaakfpaclkrsgdscawyrsgaapkefledp 220

RESULT 3 STANDARD: PRT: 220 AA.
 ID TIM2_MOUSE
 AC P25785;
 DT 01-MAY-1992 (REL. 22, CREATED)
 DT 01-APR-1993 (REL. 25, LAST SEQUENCE UPDATE)
 DT 01-NOV-1995 (REL. 32, LAST ANNOTATION UPDATE)
 DE METALLOPROTEINASE INHIBITOR 2 (TISSUE INHIBITOR OF METALLOPROTEINASES-2).
 GN TIMP2 OR TIMP-2.
 OS MUS MUSCULUS (MOUSE).
 OS EUTHERIA: METAZOA; CHORDATA: VERTEBRATA; TETRAPODA: MAMMALIA; EUTHERIA: RODENTIA.
 [1] SEQUENCE FROM N.A.
 RC STRAIN-BALB/C;
 RX MEDLINE: 92290292.
 RA SHIMIZU S., MALIK K., SEJIMA H., KISHI J.I., HAYAKAWA T., KOIMAI O.;
 RA GENE 114:291-292(1992).
 RL GENE 114:291-292(1992).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 92347693.
 RA LECO K.J., HAYDEN L.J., SHARMA R.R., ROCHELLEAU H., GREENBERG A.H.,
 RA EDWARDS D.R.;
 RA GENE 117:209-217(1992).
 RL GENE 117:209-217(1992).
 RN [3]
 RP PRELIMINARY SEQUENCE OF 27-62.
 RX MEDLINE: 91226375.
 RA KISHI J.I., OGAWA K., YAMAMOTO S., HAYAKAWA T.;
 RA MATRIX 11:10-16(1991).
 RL -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES) AND IRREVERSIBLY INACTIVATE THEM.
 CC -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES) AND IRREVERSIBLY INACTIVATE THEM.
 CC -1- PFM: THE ACTIVITY OF TIMP-2 IS DEPENDENT ON THE PRESENCE OF DISULFIDE BONDS.
 CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
 CC CC
 CC EMBL: X62622; G54802;
 CC EMBL: M82858; G202052;
 CC EMBL: M93954; G202054;
 DR PIR: S15987; S15987.
 DR PIR: JH0683; JH0683.
 UR MGI: 98753; TIMP2.
 UR PROSITE: PS00288; TIMP; 1.
 UR METALLOPROTEINASE INHIBITOR; SIGNAL.
 UR METALLOPROTEINASE INHIBITOR 2.
 FT CHAIN 27 220
 FT DISULFID 27 98
 FT DISULFID 29 127
 FT DISULFID 39 152
 FT DISULFID 154 201
 FT DISULFID 172 193
 FT DISULFID 159 164
 FT DISULFID 12 12
 FT DISULFID 21 21
 FT CONFLICT 195 195
 FT CONFLICT 220 AA: 24328 MW; EBC62FFC CRC32;
 SQ SEQUENCE 220 AA: 24328 MW; EBC62FFC CRC32;
 Query Match 98.6%; Score 1620; DB 1; Length 220;
 Best local similarity 97.3%; Pred. No. 0.00e+00; Indels 0; Gaps 0;
 Matches 214; Conservative 5; Mismatches 1; Indels 0; Gaps 0;
 Db 1 MGAARSLPLAFCLLGLTLLPRADACSCSPVPOAFNCNADVIYIRAKAVSEKENDSGND 60
 1 mgaarstlrlalglallatllrpadacscspvbpqgafcnadviirakavsekevsgnd 60
 Oy 1 mgaarstlrlalglallatllrpadacscspvbpqgafcnadviirakavsekevsgnd 60
 1 mgaarstlrlalglallatllrpadacscspvbpqgafcnadviirakavsekevsgnd 60
 Db 61 IYGNPIKRIQYEIKQIKMFPGDDIEFIYTPAAAVCGVSLDVGKREYILAGKABGDG 120
 61 IYGNPIKRIQYEIKQIKMFPGDDIEFIYTPAAAVCGVSLDVGKREYILAGKABGDG 120

Oy 61 IYGNPIKRIQYEIKQIKMFPGDDIEFIYTPAAAVCGVSLDVGKREYILAGKABGDG 120
 61 IYGNPIKRIQYEIKQIKMFPGDDIEFIYTPAAAVCGVSLDVGKREYILAGKABGDG 120
 Db 121 KMHITLDFIVPMDTISTOKKSLNRYOMGCECKITRCPCMIICYSPECEIAMDWTE 180
 121 kmhltcdflvpmdtistctqkslnhryomgceckitrcpcmiicyspdeclmndwte 180
 Oy 121 KMHITLDFIVPMDTISTOKKSLNRYOMGCECKITRCPCMIICYSPECEIAMDWTE 180
 121 kmhltcdflvpmdtistctqkslnhryomgceckitrcpcmiicyspdeclmndwte 180
 Db 181 KSIHQAKFPACIKRSDGSCAWYRGAAPKOEFLIEDP 220
 181 ksinhgaakfpaclkrsgdscawyrsgaapkefledp 220
 Oy 181 KSIHQAKFPACIKRSDGSCAWYRGAAPKOEFLIEDP 220
 181 ksinhgaakfpaclkrsgdscawyrsgaapkefledp 220

RESULT 4 STANDARD: PRT: 220 AA.
 ID TIM2_BOVIN
 AC P16368;
 DT 01-AUG-1990 (REL. 15, CREATED)
 DT 01-MAY-1991 (REL. 18, LAST SEQUENCE UPDATE)
 DT 01-FEB-1995 (REL. 31, LAST ANNOTATION UPDATE)
 DE METALLOPROTEINASE INHIBITOR 2 (TISSUE INHIBITOR OF METALLOPROTEINASES-2) (COLLAGENASE INHIBITOR).
 GN TIMP2.
 OS BOS TAURUS (BOVINE).
 OS EUTHERIA: METAZOA; CHORDATA: VERTEBRATA; TETRAPODA: MAMMALIA; EUTHERIA: ARTIODACTYLA.
 [1] SEQUENCE FROM N.A.
 RC MEDLINE: 90207285.
 RX BOONE T.C., JOHNSON M.J., DE CIERCK Y.A., LANGLEY K.E.;
 RA PROC. NATL. ACAD. SCI. U.S.A. 87:2800-2804(1990).
 RL PROC. NATL. ACAD. SCI. U.S.A. 87:2800-2804(1990).
 RN [2]
 RP SEQUENCE OF 27-71.
 RX TISSUE-CARTILAGE;
 RC MEDLINE: 86140235.
 RA MURRAY J.B., ALLISON K., SUDHATER J., LANGER R.;
 RA J. BIOL. CHEM. 261:4154-4159(1986).
 RL J. BIOL. CHEM. 261:4154-4159(1986).
 RN [3]
 RP SEQUENCE OF 27-71.
 RX MEDLINE: 90008914.
 RA DE CIERCK Y.A., YEAN T.D., RATZKIN B.J., LU H.S., LANGLEY K.E.;
 RA J. BIOL. CHEM. 264:17445-17453(1989).
 RL -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES) AND IRREVERSIBLY INACTIVATE THEM.
 CC -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES) AND IRREVERSIBLY INACTIVATE THEM.
 CC -1- PFM: THE ACTIVITY OF TIMP-2 IS DEPENDENT ON THE PRESENCE OF DISULFIDE BONDS.
 CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
 CC CC
 CC EMBL: M32303; G163342;
 CC EMBL: A25322; A25322.
 CC EMBL: A25322; A25322.
 DR PIR: A35996; A35996.
 DR PIR: A34468; A34468.
 DR PROSITE: PS00288; TIMP; 1.
 DR METALLOPROTEINASE INHIBITOR; SIGNAL.
 UR METALLOPROTEINASE INHIBITOR 2.
 FT CHAIN 27 220
 FT DISULFID 27 98
 FT DISULFID 29 127
 FT DISULFID 39 152
 FT DISULFID 154 201
 FT DISULFID 172 193
 FT DISULFID 159 164
 FT DISULFID 12 12
 FT DISULFID 21 21
 FT CONFLICT 68 68
 FT CONFLICT 220 AA: 24355 MW; 0543B3EB CRC32;
 SQ SEQUENCE 220 AA: 24355 MW; 0543B3EB CRC32;
 Query Match 94.3%; Score 1550; DB 1; Length 220;
 Best local similarity 91.8%; Pred. No. 0.00e+00; Indels 0; Gaps 0;
 Matches 202; Conservative 12; Mismatches 6; Indels 0; Gaps 0;
 Db 1 MGAARSLPLAFCLLGLTLLPRADACSCSPVPOAFNCNADVIYIRAKAVSEKENDSGND 60
 1 mgaarstlrlalglallatllrpadacscspvbpqgafcnadviirakavsekevsgnd 60
 Oy 1 mgaarstlrlalglallatllrpadacscspvbpqgafcnadviirakavsekevsgnd 60
 1 mgaarstlrlalglallatllrpadacscspvbpqgafcnadviirakavsekevsgnd 60
 Db 61 IYGNPIKRIQYEIKQIKMFPGDDIEFIYTPAAAVCGVSLDVGKREYILAGKABGDG 120
 61 IYGNPIKRIQYEIKQIKMFPGDDIEFIYTPAAAVCGVSLDVGKREYILAGKABGDG 120

RESULT	7	STANDARD;	PRT;	211 AA.
ID	TIME3 MOUSE			
AC	P39876;			
AD	01-FEB-1995 (REL. 31, CREATED)			
DT	01-FEB-1995 (REL. 31, LAST SEQUENCE UPDATE)			
DT	01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)			
DT	01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)			
DE	METALLOPROTEINASE INHIBITOR 3 PRECURSOR (TIMP-3)			(TISSUE INHIBITOR OF

Query Match	41.88;	Deco	100
Similarity	43.18;	Pred. No. 3.44e-150;	
Best Local	94;	Mismatches	56;
Conservative		Indels	12;
Matches		Gaps	10;

[illegible]

QY	7	tlalalglilla-l-l-rpadacscspvhpqatcnadvllrakavekevdsgndilgn	64
Db	60	-L--V-TIRKMKATRGFSKAPHVOIYHTTEASESLCGLKLEVN-KYOTLITGRY-EGKM	113
QY	65	pikrtyqekikimtkfg-pek-diefilytapsavscvldvgkkeyllagkaegdkm	122
Db	114	YTGICNFERMDHILTLROKRLNRYHMLGCMCKRKSCYUPLCEFTSKNECLMDMLSNFG	173
QY	123	htlcedilvptdlstcqqkslnhrqmgcecklltrcpmpcylsspdeclmwdvlekn	182
Db	174	YPGYOSKHYACIRQKRGYCYSWRMGAPDKSISNATDP	211
QY	183	lnghqakftacklrsdgscaawyraappkqgfliedp	220
RESULT	8		
ID	TIME	CHICK	STANDARD;
AC			PRT; 212 AA.
DT	01-AUG-1992	(REL. 23, CREATED)	
	01-DEC-1992	(REL. 24, LAST SEQUENCE UPDATE)	
	01-OCT-1996	(REL. 34, LAST ANNOTATION UPDATE)	
	METALLOPROTEINASE INHIBITOR 3 PRECURSOR (TIMP-3) (TISSUE INHIBITOR OF METALLOPROTEINASES-3) (21 KD PROTEIN OF EXTRACELLULAR MATRIX).		
DE	TIMP3 OR TIMP-3.		
GN	GALLUS GALLUS (CHICKEN).		
OS	EURKAPOTA. METAZOA. CHORDATA. VERTEBRATA. TETRAPODA. AVES; NEOGNATHAE; GALLIFORMES.		
RN	[1]		
RP	SEQUENCE FROM N.A.		
RC	TISSUE-EMBRYONIC FIBROBLAST;		
RX	MEDLINE: 92381050.		
RA	PAVLOFF N., STASKUS P.W., KISHANANI N.S., HAWKES S.P.;		
RL	J. BIOL. CHEM. 267:17321-17326(1992).		
RN	[2]		
RP	SEQUENCE OF 25-53.		
RC	TISSUE-FIBROBLAST;		
RX	MEDLINE: 91093162.		
RA	STASKUS P.W., NASTARZ F.R., PALLANCK L.J., HAWKES S.P.;		
RL	J. BIOL. CHEM. 266:449-454(1991).		
CC	-1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES) AND IRREVERSIBLY INACTIVATE THEM. MAY FORM PART OF A TISSUE-SPECIFIC ACUTE RESPONSE TO REMODELING STIMULI.		
CC	-1- SUBCELLULAR LOCATION: EXTRACELLULAR MATRIX.		
CC	-1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.		
DR	EMBL: M94531; G211902; -.		
DR	PIR: A39043; A39043.		
DR	PIR: A43429; A43429.		
DR	PROSITE: PS00288; TIMP: 1.		
DR	METALLOPROTEINASE INHIBITOR; SIGNAL.		
FT	CHAIN	1 24	
FT	DISULFID	25 212	METALLOPROTEINASE INHIBITOR 3.
FT	DISULFID	25 92	BY SIMILARITY.
FT	DISULFID	27 119	BY SIMILARITY.
FT	DISULFID	37 144	BY SIMILARITY.
FT	DISULFID	146 193	BY SIMILARITY.
FT	DISULFID	151 156	BY SIMILARITY.
FT	DISULFID	164 185	BY SIMILARITY.
SO	SEQUENCE	212 AA;	24504 MW; C0489C6F CAC32.
Query Match		41.8%;	Score 686; DB 1; Length 212;
Best Local Similarity		45.2%;	Pred. No. 3,44e-150;
Matches	90;	Conservative	49; Mismatches 50; Indels 10; Gaps 8.
Db	22	AEACTGVPIHODFACNSDIYIRAKVVGKRLMKRGP--FGF-M-R--YTYKMKMYRGFQ	75
QY	24	adacscspvhpqatcnadvllrakavekevdsgndilgnpikrtyqekikimtkfg-p	82
Db	76	IMPHVOIYTEASESLCGLKLEVN-KYOTLITGRY-EGKAYTGICNMYEKWRLTLRSOR	133
QY	83	ek-diefilytapsavscvldvgkkeyllagkaegdkmhtlcedilvptdlstcqqkslnhrqmgcecklltrcpmpcylsspdeclmwdvlekn	141
Db	134	KGLNHRHNLGCGCKIRPCYUPLCEFTSKNECLMDMLSNFGSHGQAKHAKYACIORVEGTC	193

QY	142	kslnhygmgeckiltctcmipcyisspdeclmndwtvteknhngakftaclkysdgc	201
Db	194	SWRGMAPDPKTIINATDP 212	
QY	202	awrgaapppkgefidleqp 220	
RESULT	9		
ID	TIM3_RAT	STANDARD;	PRT; 211 AA.
AC	P48032;		
DT	01-FEB-1996 (REL. 33, CREATED)		
DT	01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE)		
DT	01-FEB-1996 (REL. 33, LAST ANNOTATION UPDATE)		
DE	METALLOPROTEININASE INHIBITOR 3 PRECURSOR (TIMP-3) (TISSUE INHIBITOR OF METALLOPROTEININASES-3).		
GN	TIMP3 OR TIMP-3.		
OS	RATTUS NORVEGICUS (RAT).		
OC	EUMAROTIA; METAEOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA; EUTHERIA; RODENTIA.		
KN	[1]		
RP	SEQUENCE FROM N.A.		
RA	WU I., MOSES M.A.;		
RL	SUBMITTED (MAY-1995) TO EMBL/GENBANK/DBDJ DATA BANKS.		
CC	-1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES) AND IRREVERSIBLY INACTIVATE THEM. MAY FORM PART OF A TISSUE-SPECIFIC ACUTE RESPONSE TO REMODELING STIMULI.		
CC	-1- SUBCELLULAR LOCATION: EXTRACELLULAR MATRIX.		
CC	-1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.		
DR	EMBL: U27201, G971206; -. PROSITE: PS00288; TIMP. 1.		
KM	METALLOPROTEINASE INHIBITOR; SIGNAL.		
FT	SIGNAL 1 23		POTENTIAL.
FT	CHAIN 1 24		METALLOPROTEINASE INHIBITOR 3.
FT	DISULFID 24 91		BY SIMILARITY.
FT	DISULFID 26 118		BY SIMILARITY.
FT	DISULFID 36 143		BY SIMILARITY.
FT	DISULFID 145 192		BY SIMILARITY.
FT	DISULFID 150 155		BY SIMILARITY.
FT	DISULFID 163 184		BY SIMILARITY.
SO	SEQUENCE 211 AA; 24226 MW; 19624EF2 CRC32;		
Query Match	41.4%;	Score 680;	DB 1; Length 211;
Best Local Similarity	42.7%;	Pred. No. 1,52e-148;	
Matches 93;	Conservative 56;	Mismatches 57;	Indels 12; Gaps 10;
Db	2	TPWGLVYLISCSWLSGHNGETACSPSPHODARCNSDIYIRAKVYKCKIYKSGP--FGT 59	
QY	7	tlrlalglilla-cl-lrpadacscspvbpqacnadvyrakavekevsqndiyn 64	
Db	60	-L--V-YTIKMKMYRGFSKMPHYQIHTTESISLGLKLEVN-KYQYLLTGRY-EGKM 113	
QY	65	pklrlqyehkqkmfky-pek-defielytpasavcvsdvggkkyllaagaaegdkm 122	
Db	114	YTGACNFEYEMDHLTISQRKGLNTRYHAGCNCKIKTSICYLPCEVTSKKECLWTDMISNFG 173	
QY	123	hticldfiwpdltstctqkkslnhygmgeckiltctcmipcyisspdeclmndwtvtekn 182	
Db	174	YPGYOSKHYACIRKQGYCSWYRKMAPDPSISINATDP 211	
QY	183	lnghqakftaclkysdgcawrgaapppkgefidleqp 220	
RESULT	10		
ID	TIM1_PAPCY	STANDARD;	PRT; 207 AA.
AC	P49061;		
DT	01-FEB-1996 (REL. 33, CREATED)		
DT	01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE)		
DT	01-FEB-1996 (REL. 33, LAST ANNOTATION UPDATE)		
DE	METALLOPROTEININASE INHIBITOR 1 PRECURSOR (TIMP-1).		
GN	TIMP1.		
OS	PAPIO CYNOCEPHALUS (YELLOW BABOON).		
OC	EUKARYOTA; METAEOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA; EUTHERIA; PRIMATES.		

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RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-AORTA:
RX MEDLINE: 96011646.
RA FOROUGH R., NIKKARI S.T., HASENSTAB D., LEA H., CLOWES A.W.;
RL GENE 163:267-271(1995).
CC -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)
CC AND IRREVERSIBLY INACTIVATE THEM.
CC -1- PTM: THE ACTIVITY OF TIMP-1 IS DEPENDENT ON THE PRESENCE OF
CC DISULFIDE BONDS.
CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
DR EMBL: L37295; 6561546; -
DR PROSITE: PS00288; TIMP; 1.
KM GLYCOPROTEIN; METALLOPROTEASE INHIBITOR; ERYTHROCYTE MATURATION;
KW SIGNAL.
FT SIGNAL. 1 23 BY SIMILARITY.
FT CHAIN 24 207 METALLOPROTEINASE INHIBITOR 1.
FT DISULFID 24 93 BY SIMILARITY.
FT DISULFID 26 122 BY SIMILARITY.
FT DISULFID 36 147 BY SIMILARITY.
FT DISULFID 150 197 BY SIMILARITY.
FT DISULFID 155 160 BY SIMILARITY.
FT DISULFID 168 189 BY SIMILARITY.
FT CARBOHYD 53 53 POTENTIAL.
FT CARBOHYD 101 101 POTENTIAL.
SQ SEQUENCE 207 AA; 23213 MW; 148FBDAE CRC32;

Query Match 31.7%; Score 521; DB 1; Length 207;
Best Local Similarity 41.1%; Pred. No. 2.28e-105;
Matches 81; Conservative 39; Mismatches 70; Indels 7; Gaps 7;

Db 7 LASGILLILALIPSRACVCPHPHPPORAFNSDVLIRAKFVGPENVQGT-LYORVYIKM 65
10 laigllilallilipadescspvhpqgacnadvitakavsekgvsgndilgn-pikr 68
Db 66 TR-MYKGFQAL-SDADIRVYTPAMSVGYSFHRSHNSEEPFLIAGKLO-DGLIHITTC 122
69 lqyelqklmfkfpkdeitfylvapsavcgvldvsgkpe-yliagkaegdgfmhltlc 127
QY 123 SFVAPNNSLSLAPRGRTTYTIVGCECTVFPCLISPCIKQSGTHCLMTQQLDGSSEKF 182
128 dflvpdltstctqkkslnhygmge-ckltrcpmldpcyspdeclmmdwvteknlngh 186
Db 183 QSRHACLPREPGLCTW 199
187 qakffacikrtdgscaw 203
QY

ULT 11
TIML HUMAN STANDARD; PRT; 207 AA.
AC P01033; Q14252;
DT 21-JUL-1986 (REL. 01, CREATED)
DT 21-JUL-1986 (REL. 01, LAST SEQUENCE UPDATE)
DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
DE METALLOPROTEINASE INHIBITOR 1 PRECURSOR (TIMP-1) (ERYTHROID
DE POTENTIATING ACTIVITY) (PPA) (TISSUE INHIBITOR OF METALLOPROTEINASES)
DE (FIBROBLAST COLLAGENASE INHIBITOR) (COLLAGENASE INHIBITOR).
GN TIMP OR TIMP.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
OC EUTHERIA; PRIMATES.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE: 86040463.
RA DOCHERTY A.J.P., LYONS A., SMITH B.J., WRIGHT E.M., STEPHENS P.E.,
RA HARRIS T.J.R., MORPHY G., REYNOLDS J.J.;
RL NATURE 318:66-69(1985).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE: 85240567.
RA GASSON J.C., GOLDE D.M., KAUFMAN S.E., WESTBROOK C.A., HEWICK R.M.,
RA KAUFMAN R.J., WONG G.G., TEMPLE P.A., LEARY A.C., BROWN E.L.,
RA ORR E.C., CLARK S.C.;

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RL NATURE 315:768-771(1985).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE: 86205964.
RA CARMICHAEL D.F., SOMMER A., THOMPSON R.C., ANDERSON D.C., SMITH C.G.,
RA WELGUS H.G., STRICKLIN G.P.;
RL PROC. NATL. ACAD. SCI. U.S.A. 83:2407-2411(1986).
RN [4]
RP SEQUENCE FROM N.A.
RA KACZOREK M., HONORE N., RIBES V., DEHOUX P., CORNET P., CARTWRIGHT T.,
RA STRECK R.E.;
RL BIOTECHNOLOGY 5:595-598(1987).
RN [5]
RP SEQUENCE FROM N.A.
RC TISSUE-OVARY:
RX MEDLINE: 91025550.
RA RAPP G., FREUDENSTEIN J., KLAUDINY J., MOCHA J., WEMPE F., ZIMMER M.,
RL SCHERT K.H.;
RN [6]
RP SEQUENCE FROM N.A.
RX MEDLINE: 94123576.
RA OBERROCK A., KENNEY M.C., BROWN D.;
RL CURR. EYE RES. 12:877-883(1993).
RN [7]
RP SEQUENCE OF 42-207 FROM N.A.
RA MATSUDA T., KOHNO K., KURANO M.;
RL SUBMITTED (JUL-1992) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [8]
RP SEQUENCE OF 1-40 FROM N.A.
RA HARDCASTLE A.J.;
RL SUBMITTED (SEP-1995) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [9]
RP DISULFIDE BONDS, AND PARTIAL SEQUENCE.
RX MEDLINE: 90303199.
RA WILLIAMSON R.A., MARTSON F.A.O., ANGAL S., KOKLITIS P., PANICO M.,
RA MORIS H.R., CARNE A.F., SMITH B.J., HARRIS T.J.R., FREEDMAN R.B.;
RL BIOCHEM. J. 268:267-274(1990).
RN [10]
RP SEQUENCE OF 24-38.
RC TISSUE-SYNOVIAL FLUID;
RX MEDLINE: 92111776.
RA OSTHUES A., KNAUEPER V., OBERROCK R., REINKE H., TSCHESCHE H.;
RL FEBS LETT. 296:16-20(1992).
RN [11]
RP MOTAGENESIS.
RX MEDLINE: 93041700.
RA O'SHEA M., WILLENBROCK F., WILLIAMSON R.A., COCKETT M.I.,
RA FREEDMAN R.B., REYNOLDS J.J., DOCHERTY A.J.P., MORPHY G.;
RL BIOCHEMISTRY 31:10146-10152(1992).
RN [12]
RP -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)
RP AND IRREVERSIBLY INACTIVATE THEM. ALSO MEDIATES ERYTHROPOIETIS IN
RP GROWTH AND DIFFERENTIATION OF ONLY HUMAN AND MURINE ERYTHROID
RP PROGENITORS.
CC -1- PTM: THE ACTIVITY OF TIMP-1 IS DEPENDENT ON THE PRESENCE OF
CC DISULFIDE BONDS.
CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
DR EMBL: X03124; G37183; -
DR EMBL: X12670; G182483; -
DR EMBL: X02598; G31189; -
DR EMBL: M59906; G189382; -
DR EMBL: S68252; E119406; -
DR EMBL: D11139; G220125; -
DR EMBL: L47361; G994731; -
DR EMBL: A10416; G490094; -
DR PIR: A01269; ZYHERP.
DR PIR: A23534; Z3534.
DR PIR: A35826; A35826.
DR PIR: S20318; S20318.
DR PIR: S05370; -
DR PROSITE: PS00288; TIMP; 1.
KM GLYCOPROTEIN; METALLOPROTEASE INHIBITOR; ERYTHROCYTE MATURATION;

```

KW SIGNAL. 1 23
 FT CHAIN 24 207 METALLOPROTEINASE INHIBITOR 1.
 FT DISULFID 24 93
 FT DISULFID 26 122
 FT DISULFID 36 147
 FT DISULFID 150 197
 FT DISULFID 155 160
 FT DISULFID 168 189
 FT CARBOHYD 53 53
 FT CARBOHYD 101 101
 FT CONFLICT 23 23
 FT CONFLICT 44 44
 SQ SEQUENCE 207 AA; 23171 MW; 8B7E3B4E CRC32;
 Query Match 31.7%; Score 521; DB 1; Length 207;
 Best Local Similarity 41.1%; Pred. No. 2,28e-105;
 Matches 81; Conservative 39; Mismatches 70; Indels 7; Gaps 7;
 7 LASSGILLMLIAPSRACCTVPPHPQAFPCNSDLVIRAKFVGTPPVNOCT-LYORREIKM 65
 10 lalglillatllrpdacscspvhpqafcnadvlirakavekevdsndlygn-pikr 68
 Db 66 TK-MFKGQAL-GDADIRFYTPPAMESVCGYFHSRSHRSEFLIAGKIQ-DGLIHITTC 122
 QY 69 lqyeltqlmktgpkedeliytlapssavcgsldvggkx-yliagkaegdgkmlhtlc 127
 Db 123 SEVAPWNSLSLQRFQFTYVGCCECTVFPCLSPCKLQSGTCLMTDOLQSEKGF 182
 QY 128 dflpwtldstlgtqkkslnhygmge-ckltrcpmpcysspdeclmndvteknlngh 186
 Db 183 QSRHLACLPPQEGICAW 198
 QY 187 qaktfacklrsdgscaw 203
 RESULT 12
 ID TIM1_RABIT STANDARD; PRT; 206 AA.
 AC P20614;
 DT 01-FEB-1991 (REL. 17, CREATED)
 DT 01-FEB-1991 (REL. 17, LAST SEQUENCE UPDATE)
 DT 01-NOV-1995 (REL. 32, LAST ANNOTATION UPDATE)
 DE METALLOPROTEINASE INHIBITOR 1 PRECURSOR (TIMP-1).
 GN TIMP1.
 OS ORCTOLAGUS CUNICULUS (RABBIT).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
 OC EUTHERIA; LAGOMORPHA.
 [1]
 SEQUENCE FROM N.A.
 MEDLINE; 89214135.
 RA HOKOWITZ S., DAFNI N., SHAPIRO D.L., HOLM B.A., NOTTER R.H.,
 RA OUBILE D.J.;
 J. BIOL. CHEM. 264:7092-7095(1989).
 CC -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)
 CC AND IRREVERSIBLY INACTIVATE THEM.
 CC -1- PPM: THE ACTIVITY OF TIMP-1 IS DEPENDENT ON THE PRESENCE OF
 CC DISULFIDE BONDS.
 CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
 DR EMBL: J04712; G165743; -
 DR PIR: A33350; A33350.
 DR PROSITE; PS00288; TIMP. 1.
 KW GLYCOPROTEIN; METALLOPROTEASE INHIBITOR; ERYTHROCYTE MATURATION;
 KW SIGNAL.
 FT SIGNAL. 1 23
 FT CHAIN 24 206 METALLOPROTEINASE INHIBITOR 1.
 FT DISULFID 24 93
 FT DISULFID 26 122
 FT DISULFID 36 147
 FT DISULFID 150 196
 FT DISULFID 155 160
 FT DISULFID 168 188
 FT CARBOHYD 53 53
 FT CARBOHYD 101 101
 FT CONFLICT 23 23
 FT CONFLICT 44 44
 SQ SEQUENCE 207 AA; 23031 MW; 772EF1F0 CRC32;







SQ SEQUENCE 206 AA; 22758 MW; 772EF1F0 CRC32;
 Query Match 31.5%; Score 518; DB 1; Length 206;
 Best Local Similarity 40.1%; Pred. No. 1.46e-104;
 Matches 79; Conservative 39; Mismatches 71; Indels 8; Gaps 8;
 7 LASSMLLMVLAPSRACCTVPPHPQAFPCNSDLVIRAKFVGAEVNHHT-LYORREIKT 65
 10 lalglillatllrpdacscspvhpqafcnadvlirakavekevdsndlygn-pikr 68
 Db 66 TK-MFKGQAL-GDADIRFYTPPAMESVCGYFHSRSHRSEFLIAGKIQ-DGLIHITTC 122
 QY 69 lqyeltqlmktgpkedeliytlapssavcgsldvggkx-yliagkaegdgkmlhtlc 127
 Db 123 SEVAPWNSLSLQRFQFTYVGCCECTVFPCLSPCKLQSGTCLMTDOLQSEKGF 182
 QY 128 dflpwtldstlgtqkkslnhygmge-ckltrcpmpcysspdeclmndvteknlngh 186
 Db 183 QSRHLACLPPQEGICAW 198
 QY 187 qaktfacklrsdgscaw 203
 RESULT 13
 ID TIM1_BOVIN STANDARD; PRT; 207 AA.
 AC P20414;
 DT 01-FEB-1991 (REL. 17, CREATED)
 DT 01-FEB-1991 (REL. 17, LAST SEQUENCE UPDATE)
 DT 01-FEB-1995 (REL. 33, LAST ANNOTATION UPDATE)
 DE METALLOPROTEINASE INHIBITOR 1 PRECURSOR (TIMP-1) (EMBRYONIN-1) (EG-1).
 GN TIMP1.
 OS BOS TAURUS (BOVINE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
 OC EUTHERIA; ARTIODACTYLA.
 [1]
 SEQUENCE FROM N.A.
 MEDLINE; 90365711.
 RA FREUDENSTEIN J., WAGNER S., LUCK R.M., EINSPIANIER R., SCHEIT K.H.;
 RA BIOCHEM. BIOPHYS. RES. COMMUN. 171:250-256(1990).
 [2]
 SEQUENCE FROM N.A.
 MEDLINE; 94257757.
 RA SATOH T., KOBAYASHI K., YAMASHITA S., KIKUCHI M., SENDAI Y., HOSHI H.;
 RA BIOL. REPROD. 50:835-844(1994).
 [3]
 PRELIMINARY SEQUENCE OF 24-69.
 RX MEDLINE; 90008914.
 RA DE CLERCK Y.A., YEAN T.D., RATZKIN B.J., LU H.S., LANGLEY K.E.;
 RA J. BIOL. CHEM. 264:17445-17453(1989).
 CC -1- FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)
 CC AND IRREVERSIBLY INACTIVATE THEM.
 CC -1- PPM: THE ACTIVITY OF TIMP-1 IS DEPENDENT ON THE PRESENCE OF
 CC DISULFIDE BONDS.
 CC -1- SIMILARITY: HIGH WITH OTHER MEMBERS OF THE TIMP FAMILY.
 DR EMBL: M60073; G163761; -
 DR PIR: S70841; G546974; -
 DR PIR: A35685; A35685.
 DR PIR: B34468; B34468.
 DR PROSITE; PS00288; TIMP. 1.
 KW GLYCOPROTEIN; METALLOPROTEASE INHIBITOR; ERYTHROCYTE MATURATION;
 KW SIGNAL.
 FT SIGNAL. 1 23
 FT CHAIN 24 207 METALLOPROTEINASE INHIBITOR 1.
 FT DISULFID 24 93
 FT DISULFID 26 122
 FT DISULFID 36 147
 FT DISULFID 150 197
 FT DISULFID 155 160
 FT DISULFID 168 189
 FT CARBOHYD 53 53
 FT CARBOHYD 101 101
 FT CONFLICT 23 23
 FT CONFLICT 44 44
 SQ SEQUENCE 207 AA; 23031 MW; 772EF1F0 CRC32;

```
Db      10 GILLMTATSPACCTCPVPHHPTAFNCSEVYIRAKFKGLTAEVNE-DALYQRYEIKMKR-   67  
       | : ||| : : : : : : : : : : : : : : : : : : : : : : : : : : : : :  
Oy     13 gllltaatlpradaccscvpyhgafcnadvirakavsekevdsngndiygn-pikrlyg 71  
  
Db      68 MFKGSAIRDAP-DIRFIYTPAMESVCYFHRSONRSEEPILIAQL-SNGHLHTTCSEV 125  
       | : : : : : : : : : : : : : : : : : : : : : : : : : : : : :  
Oy     72 elkgqlmtkmgpekdelftyltapssavcsldavgkke-yllagkaeedgymhlldcfl 130  
  
Db     136 AFWNSSAQRGRGFRTYAAGCEECCTVPCCSIPKICLSDIHLCMLTDIOLLGSDKGQSR 185
```

		30.9%;	Score 508; DB 1; Length 217;
		Best Local Similarity 38.4%;	Pred. 6, neg 102;
	Matches	78; Conservative	39; Mismatches 78; Indels 8; Gaps 8.
Dd	7	LASGLLILSLIASSKACSCAPTRPQRNFNSDLVIRAKFGSEPTETTLRYRITKM	65
		:	:
		:: :	: :
		:: :	: :
Oy	10	IAlGILLIaLLIPadaascspvhpqgfcaadvIrItakavasekevsndnlygn-pikr	68

Db 66 TK-MLGFDAY-GNATGFRPAYTPAMESLGGYHKSONRSEEFLLIAGRRL-NGNLHITAC 122
QY 69 lgyelqikmfkxgpekdielifylcpssavcg-vslavgkkeyllagkaegdgkmlhtlc 127
Db 123 SEIVPWHNLSPAQOKAFVKTYSAGCGVCTVFPSCSAIPCKULESDSHCLMTDQIIMGSEKGY 182
QY 128 dliwpcdtlstqkkslnhrqmgce-ckltcplmfpaylsspdeclmndwvleknlngh 186
Db 183 QSDHFACTPRNPDLCTWQYLGVS 205
QY 187 qakffacikrsdgscaw-yrqaa 208

Search completed: Mon May 4 14:49:58 1998
Job time : 13 secs.

[illegible][illegible]

Dy	421	tctggaagacgacatttatgtgcacaacctatcaagaagagtccagttatgagatacaagagata	480
Dz	481	aagatgttcaaaaggcgcttgagaagaatatagatttatcatcacggccccctcttcggca	540
Dy	481	aagatgttcaaaaggcgcttgagaagaatatagatttatcatcacggccccctcttcggca	540
Dz	541	gtcgtctgaggtcttcgcctcgagcgtttgaaagaaaagaatctcatcttgcsagaaagcc	600
Dy	541	gtcgtctgaggtcttcgcctcgagcgtttgaaagaaaagaatctcatcttgcsagaaagcc	600
Dz	601	gaaggaggacgacgaatgatcacatcacaccctctgtgacttcatctgcctctggacaccc	660
Dy	601	gaaggaggacgacgaatgatcacatcacaccctctgtgacttcatctgcctctggacaccc	660
Dz	661	agcacccaaccaagaagaagagcctgtaaacacacaggtacacagatgctgcgtgagtgcaagac	720
Dy	661	agcacccaaccaagaagaagagcctgtaaacacacaggtacacagatgctgcgtgagtgcaagac	720
Dz	721	acgagcgtcccccatgaccccgttgtcatctctctcccggaagagtgcctctgtagtac	780
Dy	721	acgagcgtcccccatgaccccgttgtcatctctctcccggaagagtgcctctgtagtac	780
Dz	781	tgggttcacagagaagaagatcatcacacggcgacacagggccaaagtctcttcgctgcatacaagaga	840
Dy	781	tgggttcacagagaagaagatcatcacacggcgacacagggccaaagtctcttcgctgcatacaagaga	840
Dz	841	agtgaaagcgctctctgtgcgtgtatctgcgcgcgcgcgcgcgccccaagaagagttcttcgac	900
Dy	841	agtgaaagcgctctctgtgcgtgtatctgcgcgcgcgcgcgcgccccaagaagagagttcttcgac	900
Dz	901	atcgaaagaaacccatagaagagcctccaaagccccctgtggtccaatgcaaaaaaagctcca	960
Dy	901	atcgaaagaaacccatagaagagcctccaaagccccctgtggtccaatgcaaaaaaagctcca	960
Dz	961	agggtttcgcagctgtgtccagctctgacatccctctctctgnaaagaagcatgataaaacactic	1020
Dy	961	agggtttcgcagctgtgtccagctctgacatccctctctctctgnaaagaagcatgataaaacactic	1020
Dz	1021	atcccccggaattc 1033	
Dy	1021	atcccccggaattc 1033	
RESULT	3		
ID	005940	standard; DNA: 730 BP.	
AC	005940;		
DT	16-JAN-1991	(first entry)	
		Complete sequence of human TIMP-2 from cDNA pSS38.	
		Matrix metalloproteinase inhibitor: TIMP-2; PSS38; SS.	
~	Synthetic.		
FH	Key	Location/Qualifiers	
FT	CDS	18..602	
FT	/tag- a		
FT	/product=complete human TIMP-2		
FT	polya_site	695..700	
FT	/tag- b		
FT	/note="putative"		
PN	US7494796-A.		
PD	21-AUG-1990:		
PR	13-MAR-1990; 494796.		
PR	21-MAR-1989; US-326334.		
PR	17-JUL-1989; US-380431.		
PR	18-AUG-1989; US-395453.		
PR	13-MAR-1990; US-494796.		
PA	(USSH) NAO INSTR OF HEALTH.		
PI	Stetler-Stevenson WG, Liotta JA, Kruetzsch HC;		
DR	WPL: 80-79067/738.		
DR	P-PDBJ: R06898.		
PT	New matrix metallo-proteinase inhibitor - used to treat diseases		
PT	resulting from matrix metallo-proteinase activity and in		
PT	diagnosis, detection and purification.		
PS	Disclosure: Fig 7, 54pp; English.		
CC	TIMP-2 was isolated from human melanoma cell-conditioned media and		

The amino acid sequence determined. A probe was synthesised based upon the protein sequence information. It was used to screen a Lambdaem 4 cDNA library prepared from human melanoma cells. 239 positives were identified from a total of 750,000 plaques screened. Further analysis and screening with additional probes eliminated most of the clones. Clone pSS38 was isolated and the nucleotide sequence of the cDNA insert was determined. The deduced amino acid sequence showed excellent agreement with that derived by directly sequencing the TIMP-2 protein.

See also U573174/07 and M09010228.
 CC See also Q05937, R06746-R06750, R06894-R06895 and Q05938-Q05939.
 CC Sequence 730 BP; 189 A; 209 C; 201 G; 131 T;

Query Match 67.9%; Score 701; DB 1; Length 730;
 Best Local Similarity 99.7%; Pred. No. 0.00e+00;
 Matches 708; Conservative 0; Mismatches 1; Indels 1; Gaps 1.

Db 3 cggccggcgccgagcgcgtgacgtctcccccgtgacccgcgaacgaggggttttgcaatga 62
 Qy 316 cggccggcgccgagcgcgtgacgtctcccccgtgacccgcgaacgaggggttttgcaatga 375
 Db 63 gatgtagtatcatcaggcccaagcggctcagttgagaaggaatgtgacctctggaaaaacatc 122
 Qy 376 gatgtagtatcatcaggcccaagcggctcagttgagaaggaatgtgacctctggaaaaacatc 435
 Db 123 tatggcaacctatccaagagagatccagtatagatccaagcagataaagaatgttcaaaagg 182
 Qy 436 tatggcaacctatccaagagagatccagtatagatccaagcagataaagaatgttcaaaagg 495
 Db 183 ccttgaagaaggtatagaattatctatacagccccccctctggcaggtgttgggtctcg 242
 Qy 486 ccttgaagaaggtatagaattatctatacagccccccctctggcaggtgttgggtctcg 555
 Db 243 ctggaacgttggagaagaaagaaatctctcttcagagaagagccgagggggagcggcaag 302
 Qy 556 ctggaacgttggagaagaaagaaatctctcttcagagaagagccgagggggagcggcaag 615
 Db 303 atgcaatcacccctctgtgacttatcgtctgccctgggaacacctgaaacacacccagaag 362
 Qy 616 atgcaatcacccctctgtgacttatcgtctgccctgggaacacctgaaacacacccagaag 675
 Db 363 aagaacccctgaacccaaggttaccagaatggctcgagatggtgcaagatcagaagcgtgcgccatg 422
 Qy 676 aagaacccctgaacccaaggttaccagaatggctcgagatggtgcaagatcagaagcgtgcgccatg 735
 Db 423 atcccgctctacatctctcccccggagagatgctctctgatatgagactgtgtctacagagaag 482
 Qy 736 atcccgctctacatctctcccccggagagatgctctctgatatgagactgtgtgtctacagagaag 795
 Db 483 aacatcaacgaggcaacagagccaagtctcttcgctctgcatcaagagaagtgaactgtctctgt 542
 Qy 796 aacatcaacgaggcaacagagccaagtctcttcgctctgcatcaagagaagtgaactgtctctgt 855
 Db 543 ggcgtgtatccgc 602
 Qy 856 ggcgtgtatccgc 915
 Db 603 ggaagcctcccaagcgcgcctgtgccaactgtcaaaaaaagccctccaagaggtttgac-9gt 661
 Qy 916 ggaagcctcccaagcgcgcctgtgccaactgtcaaaaaaagccctccaagaggtttgacgtgt 975
 Db 662 ccagctctgacatcccttctctggaagaacagcatgataaacaactcatcc 711
 Qy 976 ccagctctgacatcccttctctggaagaacagcatgataaacaactcatcc 1025

RESULT 4
 ID Q05938 standard; cDNA; 840 BP.
 AC Q05938;
 DT 16-JAN-1991 (first entry)
 DE TIMP-2 metalloproteinase inhibitor-encoding clone pSS15.
 KW matrix metalloproteinase inhibitor; TIMP-2; pSS15; ss.
 OS Synthetic.

[illegible]**RESULT 6**

IC	T64341: standard; cDNA to mRNA; 671 BP.
AD	T64341:
AC	
DT	21-MAY-1997 (first entry)
DE	Human small tissue inhibitor metalloprotease 2 gene.
DE	Human small tissue inhibitor metalloprotease; TIMP-2; cancer;
KW	brain tumour; malignant; diagnosis; ds.
KW	Homo sapiens.
OS	J09000265-A.
PN	07-JAN-1997.
PD	22-JUN-1995; 156307.
PF	22-JUN-1995; JP-156307.
PR	(EISA) EISAI CO LTD.
PA	
DR	WPI: 97-112848/11.
FT	New human small tissue inhibitor metallo:protease 2 gene - used in
FT	the detection of cancer, and to inspect malignancy of cerebral
PT	tumour
PS	Claim 1; Page 5; 5pp; Japanese.
CC	The present sequence is that of the human small tissue inhibitor
CC	metalloprotease 2 (TIMP2) DNA. Expression of this sequence is
CC	negatively correlated with brain tumour malignancy, i.e. relative
CC	expression levels are: normal brain tissue > astrocytoma >
CC	anaplastic astrocytoma > glioblastoma. By determining the level of
CC	TIMP 2 expression in human brain tissue, the malignancy of cerebral
CC	tumours can be evaluated.
Q0	Sequence 671 BP; 177 A; 184 C; 196 G; 114 T;

Query Match	60.98;	Score 629;	DB 28;	Length 671;
Best Local Similarity	100.08;	Pred. No. 0.00e+00;		
Matches 629;	Conservative 0;	Mismatches 0;	Indels 0;	Gaps 0;

Db	43	agtgtatcagggcccaagrgtgcagtgtgagaaagatgtgactcttgaaacgaattttgg	102
QY	391	atgtgtcagggcccaagrgtgcagtgtgagaaagatgtgactcttgaaacgaattttgg	440
Db	103	caaccctcaagagagatccagttgtgaatcaagcagataaagatgtttcaaaagggcctga	1620
QY	441	caaccctcaagagagatccagttgtgaatcaagcagataaagatgtttcaaaagggcctga	5000
Db	163	gaagagataagatttatctacacagggcccccctctcggcagtgctgtgggtctcgcctga	2220
QY	501	gaagagataagatttatctacacagggcccccctctcggcagtgctgtgggtctcgcctga	5600
Db	223	ctgttgaaagaaagagatatatccattgacggagaaagccgaaggagggaacgacaatgtga	2820
QY	561	ctgttgaaagaaagagatatatccattgacggagaaagccgaaggagggaacgacaatgtga	6200
Db	283	catcacccctctgtgacttcatctgtgccctcttgagaaaccccttgagcaccaccgaaagagag	3420

QY	621	catcaaccctctgtaattcatcagcggccctctggaaacccttgagccaccaccagaagaagag	660
Db	343	ccctgaaccacacaggtacacagatctgggctctggagtgcgaagatcacacgctctgcccatagtccc	4020
QY	661	ccctgaaccacacaggtacacagatctgggctctggagtgcgaagatcacacgctctgcccatagtccc	7400
Db	403	gtgtgatacatctctctcccccagacagctgtgcctctctgatatgtaactgtgtcacaagagaagaacat	4620
QY	741	gtgtgatacatctctctcccccagacagctgtgcctctctgatatgtaactgtgtcacaagagaagaacat	8000
Db	463	caacggcgacaccaaagccaagtctcttcgcctgcatacctaagaagaagtgcacggctcctctgtcgtg	5220
QY	801	caacggcgacaccaaagccaagtctcttcgcctgcatacctaagaagaagtgcacggctcctctgtcgtg	8600
Db	523	gtaccgcgctgcgctgcgcgcgcgcgcacaaagcagaagttctctgcacatcagagataccataagaag	5820
QY	861	gtaccgcgctgcgctgcgcgcgcgcacaaagcagaagttctctgcacatcagagataccataagaag	9200
Db	583	cctccaagagcccccgtgtggccaactgcagaaataaagcctccaagagtttcgcgctgttccagc	6420
QY	921	cctccaagagcccccgtgtggccaactgcagaaataaagcctccaagagtttcgcgctgttccagc	9800
Db	643	tctgacatcccttctctggaacagcatga	671
QY	981	tctgacatcccttctctggaacagcatga	1009

RESULT 7

ID	Q06583 standard; cDNA; 1045 BP
AC	Q06583:
DT	21-FEB-1991 (first entry)
DE	Sequence encoding bovine metalloproteinase inhibitor.
KW	Tumour; Chemotherapy; cancer; Paget's disease; osteoporosis;
KM	scleroderma; cholesteatoma; ds.
OS	Bos taurus.
FT	Key
FT	CDS
FT	Location/Qualifiers
FT	/*tag- a
FT	mat.peptide
FT	367..948
FT	/*tag- b
FT	EP-398753-A.
PN	22-NOV-1990.
PD	18-MAY-1990; 305433.
PF	19-MAY-1989; US-355027.
PR	29-MAR-1990; US-501904.
PA	(AMGE-) AMGEN INC.
PA	(CHIL-) CHILDREN'S HOSPITAL OF LA.
PI	Langley KE, Boone TC, Declerck YA;
PI	WPI: 90-350481/47.
DR	P-PSDB: R07954.
PT	New metalloproteinase inhibitor polypeptide(s) - and DNA
PT	encoding them, for treatment of tumour cell dissemination and
PT	rheumatoid arthritis
PS	Claim 12; Fig 1; 63pp; English.
CC	Sequence may be used to transform a prokaryotic or eukaryotic
CC	expression system to give a product with all the biological
CC	properties of naturally occurring metalloproteinase inhibitor.
CC	The product has therapeutic use in inhibiting tumour dissemination
CC	during chemotherapy and radiation therapy, impurged bone marrow cell
CC	harvesting etc. The inhibitor may also be useful in encapsulating
CC	tumours aiding clean excision, and in treatment of emphysema, Paget's
CC	disease, osteoporosis, scleroderma and bedsores.
CC	The gene product also has application in autoimmune disorders eg.
CC	rheumatoid arthritis and multiple sclerosis.
CC	See also Q06584.
SC	Sequence 1045 BP; 219 A; 350 C; 311 G; 165 T;

	Query Match	58.0%	Score 599	DB 1	Length 1045
	Best Local Similarity	89.6%	Pred No. 0.00e+00		
	Matches 706	Conservative 0	Mismatches 77	Indels 5	Gaps 1
Db	263 ccgagcccccgcgcctctccgcgcacatgaggcgcgcgcgcgcagctgcgcgtcgt	322			

Db 1038 tgaataaa 1045
|||||
QY 1007 tgaataaa 1014

RESULT 9
ID T26262 standard; cDNA to mRNA; 302 BP.
AC T26262;
DT 10-OCT-1996 (first entry)
DE Human gene signature HMG508501.
KW Gene signature; messenger RNA; mRNA; relative abundance; frequency;
human; cloning; mapping; non-biased library; diagnosis; detection;
cell typing; abnormal cell function; ss.
OS Homo sapiens.
PN M0951472-A1.
PD 01-JUN-1995.
PE 11-NOV-1994; J01916.
PR 12-NOV-1993; JP-355504.
PS (MATS/) MATSUBARA K.
(OKUB/) OKUBO K.
Matsubara K, Okubo K;
WPI: 95-206931/27.
PT Identifying gene signatures in 3'-directed human cDNA library - e.g.
for diagnosis of abnormal cell function, by preparing cDNA that
reflects relative abundance of corresp. mRNA in specific human
tissues
PS Claim 1; Page 2041; 2245pp; Japanese.
CC A single-stranded DNA (or its complementary strand or the corresp.
double-stranded DNA) which comprises one of the 7837 "GS" sequences
given in T19001-T26837 and which is able to hybridise to part of
human genomic DNA, cDNA or mRNA is claimed. The GS (gene signature)
sequences were obtained from 3'-directed cDNA libraries prepared
from various human tissues; synthesis of cDNA was initiated from the
3'-end of mRNA by using poly(T) as the sole primer. Since the 3'-
untranslated sequence is unique to a particular mRNA species, almost
all the 3'-oriented cDNAs hybridise with specific mRNAs. Each library
is constructed so as to reflect accurately the relative abundance of
different mRNAs in the particular tissue from which it was derived.
CC The appearance frequency of a given GS in a cDNA library can be
determined (esp. using primers and probes derived from the GS
sequences) as a means of diagnosing abnormal cell function or for
recognising different cell types.
CC Sequence 302 BP; 75 A; 96 C; 75 G; 53 T;
SQ

Query Match 27.9%; Score 288; DB 21; Length 302;
Best Local Similarity 99.0%; Pred. No. 1,22e-15;
Matches 288; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

1 gatcccggtacatctctctcccccagacagtgctctcgatgagctggtacagaa 60
|||||
QY 735 gatcccggtacatctctctcccccagacagtgctctcgatgagctggtacagaa 794

Db 61 gaacatcaacgggacacagcagaattctcgctgnaatcaagaagaatgacggtctctg 120
|||||
QY 795 gaacatcaacgggacacagcagaattctcgctgnaatcaagaagaatgacggtctctg 854

Db 121 tgcgtgtgacggcgcgcgngcncncccaagcagagattctcgacatcgaggaccata 180
|||||
QY 855 tgcgtgtgacggcgcgcgngcncncccaagcagagattctcgacatcgaggaccata 914

Db 181 agcagggctccaacgccccctgtgccaactgcaaaaaagcctccaagggtttcagctgg 240
|||||
QY 915 agcagggctccaacgccccctgtgccaactgcaaaaaagcctccaagggtttcagctgg 974

Db 241 tccagcttgacatccctctctgnaaagcagatgataaacaactcatccc 291
|||||
QY 975 tccagcttgacatccctctctgnaaagcagatgataaacaactcatccc 1025

RESULT 10
ID T34433 standard; cDNA; 675 BP.
AC T34433;
DT 09-OCT-1996 (first entry)

DE Tissue inhibitor of metalloproteinase-4 cDNA.
KW Tissue inhibitor of metalloproteinase-4; TIMP-4; cancer; arthritis;
bone resorption; Paget disease; gene therapy; diagnosis; ss.
OS Homo sapiens.
FH Key
FT sig_peptide 1..87
FT /tag- a
FT mat_peptide 88..672
PN /tag- b
PN M09618725-A1.
PD 20-JUN-1996.
PE 13-DEC-1994; U14498.
PR 13-DEC-1994; WO-U14498.
PA (HUMA-) HUMAN GENOME SCI INC.
PI Greene JM, Rosen CA;
DR WPI: 96-300644/30.
DR P-PDB: R98265.
PT DNA encoding human tissue inhibitor of metalloproteinase-4 (TIMP-4)
PT - useful to treat, e.g. cancer, arthritic diseases, bone resorption
PT diseases, etc.
PS Claim 1; Fig 1; 49pp; English.
CC A full-length cDNA clone (T34433) codes for human tissue inhibitor
CC of metalloproteinase-4 (TIMP-4) (R98265), which was identified as
CC a novel member of the TIMP family. The cDNA clone was obt. from
CC a cDNA library derived from an early stage human brain. It can be
CC used for prodn. of recombinant TIMP-4, using e.g. Escherichia coli,
CC COS or insect cell hosts. It can also be used in gene therapy, or
CC to design probes for use in diagnosis of a disease, or a
CC susceptibility to a disease, related to a mutation in the human
CC TIMP-4 gene.
SQ Sequence 675 BP; 153 A; 184 C; 184 G; 154 T;

Query Match 10.2%; Score 105; DB 22; Length 675;
Best Local Similarity 61.9%; Pred. No. 7.46e-45;
Matches 331; Conservative 0; Mismatches 232; Indels 9; Gaps 2;

Db 36 gctttgtgctgctgctgctgctgctgctgctgctgctgctgctgctgctgctgctg 95
|||||
QY 279 gctttgtgctgctgctgctgctgctgctgctgctgctgctgctgctgctgctgctg 338

Db 96 cggcccgcgacacccctcagcagcagatctgctgctgctgctgctgctgctgctgctg 155
|||||
QY 339 cttcccggtgaccccgacacagcagcagcgttttgatgacatgacatgacagcagc 398

Db 156 ctccagtgagagtgatgtccggccagtgacacccctgctaca-----ctgaanaatgct 212
|||||
QY 399 gttcagtgagagtgatgtccggccagtgacacccctgctaca-----ctgaanaatgct 458

Db 213 ccggtatgaatcaaaacagataaagatgttaaaagggtttgaagaagcagaagtgctca 272
|||||
QY 459 ccagtaagagatcacaagcagataaagatgttaaaagggtttgaagaagcagaagtgctca 512

Db 273 gtaatactacgctcttctgactcttccctctgctgctgctgctgctgctgctgctgctg 332
|||||
QY 513 gttatactacgctcttctgactcttccctctgctgctgctgctgctgctgctgctgctg 572

Db 333 gaagcagatctcttctgactgctgctgctgctgctgctgctgctgctgctgctgctg 392
|||||
QY 573 gaagcagatctcttctgactgctgctgctgctgctgctgctgctgctgctgctgctg 632

Db 393 caagttaactcagccctggggagagccttcttctggtgagaggggaagctggaatcatca 452
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QY 633 tgaacttaactcagccctggggagagccttcttctggtgagaggggaagctggaatcatca 692

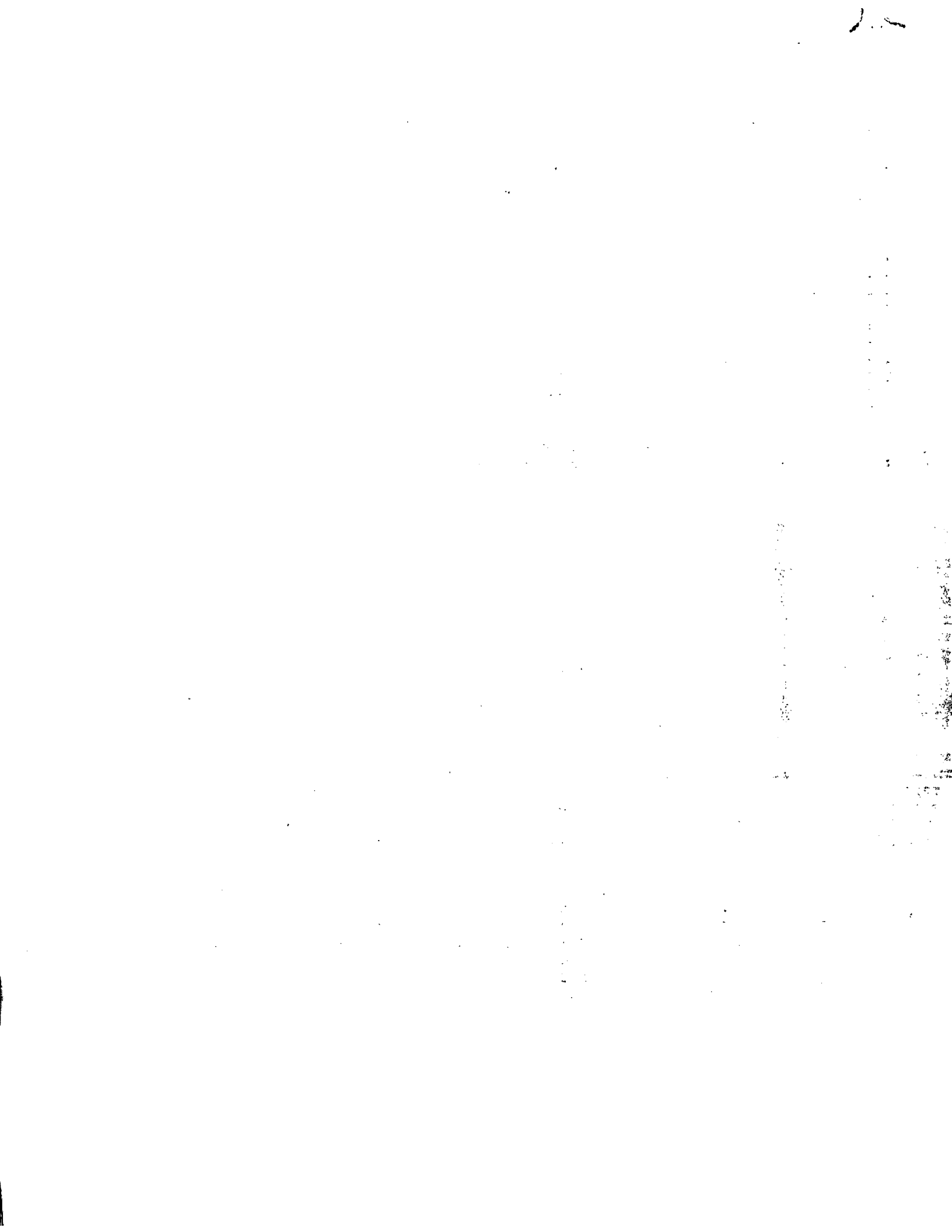
Db 453 ctacacatgaactgctgctccaatcacaactgctacacagatcaccctgtacacatctc 512
|||||
QY 693 gtacacagatggcgcgagtgcaagatcagcgtgtcccatgacccgtgtctacatctc 752

Db 513 ggccctaaagatgctctgagacagctgctgttggaacgaagctctatggttaca 572
|||||
QY 753 ctcccgagagtgctgctgtgactggtgtacagagaagaacatcaacgagcagca 812

Db 573 ggtccagattatgtctgtatgaagcagatgttgacgacccctgctgtaacgggggca 632







25;265(36):225701)
AU Wilhelm S M; Co...er I E; Marmer B L; Eisen A Z; ...nt G A; Goldberg
G I
CS Division of Dermatology, Washington University School of Medicine,
St. Louis, Missouri 63110.
NC AR 39427 (NIAMS)
AR 12129 (NIAMS)
AR 07284 (NIAMS)
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1989 Oct 15) 264 (29)
17213-21.
Journal code: HIV. ISSN: 0021-9258.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
OS GENBANK-J05070
EM 199001

L5 ANSWER 3 OF 82 MEDLINE DUPLICATE 3
AN 90046765 MEDLINE
DN 90046765
TI Human 72-kilodalton type IV collagenase forms a complex with a
tissue inhibitor of **metalloproteases** designated
TIMP-2.
AU Goldberg G I; Marmer B L; Grant G A; Eisen A Z; Wilhelm S; He C S
CS Division of Dermatology, Washington University School of Medicine,
Saint Louis, MO 63110.
NC AR 39427 (NIAMS)
AR 12129 (NIAMS)
AR 07284 (NIAMS)
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES
OF AMERICA, (1989 Nov) 86 (21) 8207-11.
Journal code: PV3. ISSN: 0027-8424.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199002

L5 ANSWER 4 OF 82 MEDLINE DUPLICATE 4
AN 89109210 MEDLINE
DN 89109210
TI Independent regulation of collagenase, 72-kDa progelatinase, and
metalloendoproteinase inhibitor expression in human fibroblasts by
transforming growth factor-beta.
AU Overall C M; Wrana J L; Sodek J
CS Medical Research Council Group in Periodontal Physiology, University
of Toronto, Ontario, Canada.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1989 Jan 25) 264 (3)
1860-9.
Journal code: HIV. ISSN: 0021-9258.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Cancer Journals; Priority Journals
EM 198905

L5 ANSWER 5 OF 82 MEDLINE DUPLICATE 5
AN 90037592 MEDLINE
DN 90037592
TI Synovial procollagenase activation by human mast cell tryptase
dependence upon matrix **metalloproteinase** 3 activation.
AU Gruber B L; Marchese M J; Suzuki K; Schwartz L B; Okada Y; Nagase H;
Ramamurthy N S
CS Division of Allergy, Rheumatology and Clinical Immunology, Veterans

Administration, Northport, New York 11768.

NC AR-39189 (NIAMS)
AI-20487 (NIAID)
DEO3987

SO JOURNAL OF CLINICAL INVESTIGATION, (1989 Nov) 84 (5)
1657-62.
Journal code: HS7. ISSN: 0021-9738.

CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals
EM 199002

L5 ANSWER 6 OF 82 MEDLINE
AN 90026246 MEDLINE
DN 90026246
TI Dissociation of tissue inhibitor of metalloproteinases (**TIMP**) from enzyme complexes yields fully active inhibitor.
AU Murphy G; Koklitis P; Carne A F
CS Strangeways Research Laboratory, Cambridge, U.K.
SO BIOCHEMICAL JOURNAL, (1989 Aug 1) 261 (3) 1031-4.
Journal code: 9YO. ISSN: 0264-6021.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199001

L5 ANSWER 7 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 89:416492 BIOSIS
DN BR37:71955
TI EFFECT OF CYTOKINES ON 72KDA METALLOPROTEINASE AND **TIMP** IN GINGIVAL AND PERIODONTAL LIGAMENT FIBROBLASTS.
AU RICHARDS D; HIBBS M S; RUTHERFORD R B
CS UNIV. CONN., FARMINGTON, U.S.A.
SO 67TH GENERAL SESSION OF THE INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH (IADR), 6TH MEETING OF THE IADR IRISH DIVISION, 72ND ANNUAL MEETING OF THE SCANDINAVIAN ASSOCIATION FOR DENTAL RESEARCH AND THE 26TH ANNUAL MEETING OF THE CONTINENTAL EUROPEAN DIVISION OF THE IADR, DUBLIN, IRELAND, JUNE 28-JULY 1, 1989. J DENT RES 68 (SPEC. ISSUE JUNE). 1989. 1019. CODEN: JDREAF ISSN: 0022-0345
DT Conference
LA English

L5 ANSWER 8 OF 82 MEDLINE
AN 89146140 MEDLINE
DN 89146140
TI Antisense RNA-induced reduction in murine **TIMP** levels confers oncogenicity on Swiss 3T3 cells.
AU Khokha R; Waterhouse P; Yagel S; Lala P K; Overall C M; Norton G; Denhardt D T
CS Department of Biochemistry, University of Western Ontario, London, Canada.
SO SCIENCE, (1989 Feb 17) 243 (4893) 947-50.
Journal code: UJ7. ISSN: 0036-8075.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198906

L5 ANSWER 9 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 89:281751 BIOSIS
DN BR37:6748
TI HUMAN RECOMBINANT TISSUE INHIBITOR OF METALLOPROTEINASE

TIMP INHIBITS NATIVE HUMAN STROMELYSIN IN-VITRO AND IN-VIVO.

AU LARK M W; SAPHOS A; WALAKOVITS L A; MOORE V L
 CS MERCK SHARP AND DOHME RES. LAB., BIOCHEM. MOL. PATHOL., RAHWAY, N.J.
 07065, USA.
 SO 73RD ANNUAL MEETING OF THE FEDERATION OF AMERICAN SOCIETIES FOR
 EXPERIMENTAL BIOLOGY, NEW ORLEANS, LOUISIANA, USA, MARCH 19-23, 1989.
 FASEB (FED AM SOC EXP BIOL) J 3 (3). 1989. A911. CODEN: FAJOEC ISSN:
 0892-6638
 DT Conference
 LA English

L5 ANSWER 10 OF 82 MEDLINE DUPLICATE 8
 AN 89306621 MEDLINE
 DN 89306621
 TI Genes for extracellular-matrix-degrading **metalloproteinases**
 and their inhibitor, **TIMP**, are expressed during early
 mammalian development.
 AU Brenner C A; Adler R R; Rappolee D A; Pedersen R A; Werb Z
 CS Laboratory of Radiobiology and Environmental Health, University of
 California, San Francisco 94143-0750.
 NC HD 23539 (NICHD)
 HD 23651 (NICHD)
 5 T32 ES07106 (NIEHS)
 SO GENES AND DEVELOPMENT, (1989 Jun) 3 (6) 848-59.
 Journal code: FN3. ISSN: 0890-9369.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 198910

L5 ANSWER 11 OF 82 MEDLINE DUPLICATE 9
 AN 90134705 MEDLINE
 DN 90134705
 TI Human mesangial cells secrete a GBM-degrading neutral proteinase and
 a specific inhibitor.
 AU Martin J; Davies M; Thomas G; Lovett D H
 CS Medical Service, San Francisco VAMC-University of California.
 NC R01 DK 39776-01 (NIDDK)
 SO KIDNEY INTERNATIONAL, (1989 Nov) 36 (5) 790-801.
 Journal code: KVB. ISSN: 0085-2538.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199005

L5 ANSWER 12 OF 82 MEDLINE DUPLICATE 10
 AN 89340892 MEDLINE
 DN 89340892
 TI Human osteoblasts in vitro secrete tissue inhibitor of
metalloproteinases and gelatinase but not interstitial
 collagenase as major cellular products.
 AU Rifas L; Halstead L R; Peck W A; Avioli L V; Welgus H G
 CS Department of Medicine, Jewish Hospital, Washington University
 Medical Center, St. Louis, Missouri 63110.
 NC AR-32087 (NIAMS)
 AM-35805 (NIADDK)
 AR-19855 (NIAMS)
 +
 SO JOURNAL OF CLINICAL INVESTIGATION, (1989 Aug) 84 (2)
 686-94.
 Journal code: HS7. ISSN: 0021-9738.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)

LA English
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals
EM 198911

L5 ANSWER 13 OF 82 MEDLINE DUPLICATE 11
AN 89340891 MEDLINE
DN 89340891
TI Evidence for **metalloproteinase** and
metalloproteinase inhibitor imbalance in human
osteoarthritic cartilage.
AU Dean D D; Martel-Pelletier J; Pelletier J P; Howell D S; Woessner J
F Jr
CS Department of Biochemistry & Molecular Biology, University of Miami
School of Medicine, Florida 33101.
NC AR-16940 (NIAMS)
AR-08662 (NIAMS)
SO JOURNAL OF CLINICAL INVESTIGATION, (1989 Aug) 84 (2)
678-85.
Journal code: HS7. ISSN: 0021-9738.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals
EM 198911

L5 ANSWER 14 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 89:329695 BIOSIS
DN BR37:32467
TI TRANSCRIPTIONAL CONTROL OF COLLAGENASE AND **TIMP** PRODUCTION
BY THE HUMAN MONOCYTIC CELL LINE U937.
AU SHAPIRO S D; PARKS W C; LEY T J; KAHN A J; PARTRIDGE N; CAMPBELL E J;
WELGUS H G
CS JEWISH HOSP. AT WASHINGTON UNIV. MED. CENT., ST. LOUIS, MO., USA.
SO JOINT MEETING OF THE SOCIETY FOR INVESTIGATIVE DERMATOLOGY, EUROPEAN
SOCIETY FOR DERMATOLOGIC RESEARCH, AND JAPANESE SOCIETY FOR
INVESTIGATIVE DERMATOLOGY, WASHINGTON, D.C., USA, APRIL 26-30, 1989.
CLIN RES 37 (2). 1989. 672A. CODEN: CLREAS ISSN: 0009-9279
DT Conference
LA English

L5 ANSWER 15 OF 82 MEDLINE DUPLICATE 12
AN 90126366 MEDLINE
DN 90126366
TI Developmental expression of tissue inhibitor of
metalloproteinase (TIMP) RNA.
AU Nomura S; Hogan B L; Wills A J; Heath J K; Edwards D R
CS Department of Cell Biology, Vanderbilt University Medical School,
Nashville, Tennessee 37232.
SO DEVELOPMENT, (1989 Mar) 105 (3) 575-83.
Journal code: ECW. ISSN: 0950-1991.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199005

L5 ANSWER 16 OF 82 MEDLINE DUPLICATE 13
AN 89206748 MEDLINE
DN 89206748
TI Characterization of gelatinase from pig polymorphonuclear
leucocytes. A **metalloproteinase** resembling tumour type IV
collagenase.
AU Murphy G; Ward R; Hembry R M; Reynolds J J; Kuhn K; Tryggvason K
CS Cell Physiology Department, Strangeways Research Laboratory,
Cambridge, U.K.

SO BIOCHEMICAL JOURNAL, (1989 Mar 1) 258 (2) 463-72.
 Journal code: 9 ISSN: 0264-6021.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals; Cancer Journals
 EM 198907

L5 ANSWER 17 OF 82 MEDLINE DUPLICATE 14
 AN 90093743 MEDLINE
 DN 90093743
 TI Matrix **metalloproteinases** and tissue inhibitor of
metalloproteinases: a review of their role in tumorigenesis
 and tissue invasion.
 AU Khokha R; Denhardt D T
 CS Cancer Research Laboratory, University of Western Ontario, London,
 Canada.
 SO INVASION AND METASTASIS, (1989) 9 (6) 391-405. Ref: 72
 Journal code: GV4. ISSN: 0251-1789.
 CY Switzerland
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, ACADEMIC)
 LA English
 FS Priority Journals; Cancer Journals
 EM 199004

L5 ANSWER 18 OF 82 MEDLINE DUPLICATE 15
 AN 90022890 MEDLINE
 DN 90022890
 TI Systemic administration of **TIMP** in the treatment of
 collagen-induced arthritis in mice.
 AU Carmichael D F; Stricklin G P; Stuart J M
 CS Synergen Inc., Boulder, CO 80301.
 SO AGENTS AND ACTIONS, (1989 Jun) 27 (3-4) 378-9.
 Journal code: 2XZ. ISSN: 0065-4299.
 CY Switzerland
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199001

L5 ANSWER 19 OF 82 MEDLINE DUPLICATE 16
 AN 89275215 MEDLINE
 DN 89275215
 TI The role of plasminogen in cell-mediated collagen degradation.
 AU Gavrilovic J; Murphy G
 CS Cell Physiology Department, Strangeways Research Laboratory,
 Cambridge, U.K.
 SO CELL BIOLOGY INTERNATIONAL REPORTS, (1989 Apr) 13 (4)
 367-75.
 Journal code: CRC. ISSN: 0309-1651.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 198909

L5 ANSWER 20 OF 82 MEDLINE DUPLICATE 17
 AN 90136309 MEDLINE
 DN 90136309
 TI Association of collagenase and tissue inhibitor of
metalloproteinases (TIMP) with hypertrophic cell
 enlargement in the growth plate.
 AU Dean D D; Muniz O E; Howell D S

CS Arthritis Research Laboratory, U.S. Veterans Administration Medical
Center, Miami,
NC AR-08662 (NIAMS)
SO MATRIX, (1989 Nov) 9 (5) 366-75.
Journal code: M54. ISSN: 0934-8832.
CY GERMANY, WEST: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199005

L5 ANSWER 21 OF 82 MEDLINE DUPLICATE 18
AN 89230068 MEDLINE
DN 89230068
TI The effect of lipopolysaccharide from bacteroides gingivalis and
muramyl dipeptide on osteoblast collagenase release.
AU Sismey-Durrant H J; Atkinson S J; Hopps R M; Heath J K
CS Department of Oral Pathology, London Hospital Medical College,
England.
SO CALCIFIED TISSUE INTERNATIONAL, (1989 May) 44 (5) 361-3.
Journal code: CGH. ISSN: 0171-967X.
CY GERMANY, WEST: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198908

L5 ANSWER 22 OF 82 MEDLINE DUPLICATE 19
AN 89375511 MEDLINE
DN 89375511
TI The enzymatic evaluation of procollagenase and collagenase
inhibitors in crude biological media.
AU Lefebvre V; Vaes G
CS Laboratoire de Chimie Physiologique, Universite de Louvain,
Brussels, Belgium.
SO BIOCHIMICA ET BIOPHYSICA ACTA, (1989 Sep 15) 992 (3)
355-61.
Journal code: AOW. ISSN: 0006-3002.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198912

L5 ANSWER 23 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 89:151284 BIOSIS
DN BR36:73325
TI FORMATION OF NEUTRAL PROTEINASE NP COLLAGEN IV CIV AND TISSUE
INHIBITOR OF **METALLOPROTEINASES TIMP** BY RESTING
AND PROLIFERATING MESANGIAL CELLS MCS IN CULTURE.
AU GROUND J; LOVETT D H; COFFEE M; KASHGARIAN M; STERZEL R B
CS VAMC-YALE UNIV. SCH. MED., NEW HAVEN, CONN.
SO MEETING OF THE AMERICAN SOCIETY OF NEPHROLOGY, SAN ANTONIO, TEXAS,
USA, DECEMBER 11-14, 1988. KIDNEY INT 35 (1). 1989. 348. CODEN:
KDYIA5 ISSN: 0085-2538
LA English

L5 ANSWER 24 OF 82 MEDLINE
AN 90125644 MEDLINE
DN 90125644
TI Transforming growth factor-beta regulation of collagenase, 72
kDa-progelatinase, **TIMP** and PAI-1 expression in rat bone
cell populations and human fibroblasts.
AU Overall C M; Wrana J L; Sodek J
CS Medical Research Council Group in Periodontal Physiology, University

of Toronto, Ontario, Canada.
SO CONNECTIVE TISSUE RESEARCH, (1989) 20 (1-4) 289-
Journal code: DQH. ISSN: 0300-8207.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199005

L5 ANSWER 25 OF 82 MEDLINE
AN 90014493 MEDLINE
DN 90014493
TI **Metalloproteinases** are not involved in the phagocytosis of collagen fibrils by fibroblasts.
AU Everts V; Hembry R M; Reynolds J J; Beertsen W
CS Laboratory of Histology and Cell Biology, Faculty of Medicine, University of Amsterdam, The Netherlands.
SO MATRIX, (1989 Aug) 9 (4) 266-76.
Journal code: M54. ISSN: 0934-8832.
CY GERMANY, WEST: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199001

L5 ANSWER 26 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 89:244735 BIOSIS
DN BA87:125800
TI REGIONAL LOCALIZATION OF THE **TIMP** GENE ON THE HUMAN X CHROMOSOME EXTENSION OF A CONSERVED SYNTENY AND LINKAGE GROUP ON PROXIMAL XP.
AU WILLIARD H F; DURFY S J; MAHTANI M M; DORKINS H; DAVIES K E; WILLIAMS B R G
CS DEP. MED. GENETICS, UNIV. TORONTO, MED. SCI. BUILDING 4282, TORONTO, ONTARIO M5S 1A8, CANADA.
SO HUM GENET 81 (3). 1989. 235-238. CODEN: HUGEDQ ISSN: 0340-6717
LA English

L5 ANSWER 27 OF 82 MEDLINE
AN 89154429 MEDLINE
DN 89154429
TI Regional localization of the **TIMP** gene on the human X chromosome. Extension of a conserved syntenic and linkage group on proximal Xp.
AU Willard H F; Durfy S J; Mahtani M M; Dorkins H; Davies K E; Williams B R
CS Department of Medical Genetics, University of Toronto, Ontario, Canada.
SO HUMAN GENETICS, (1989 Feb) 81 (3) 234-8.
Journal code: GED. ISSN: 0340-6717.
CY GERMANY, WEST: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198906

L5 ANSWER 28 OF 82 MEDLINE DUPLICATE 20
AN 89141242 MEDLINE
DN 89141242
TI Neutral **metalloprotease** from tendons.
AU Piening C; Riederer-Henderson M A
CS Department of Orthopaedics, University of Washington, Seattle 98195..
SO JOURNAL OF ORTHOPAEDIC RESEARCH, (1989) 7 (2) 228-34.
Journal code: JIQ. ISSN: 0736-0266.

CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198906

L5 ANSWER 29 OF 82 MEDLINE
AN 90007512 MEDLINE
DN 90007512
TI Linkage studies of the Wiskott-Aldrich syndrome: polymorphisms at **TIMP** and the X chromosome centromere are informative markers for genetic prediction.
AU Greer W L; Mahtani M M; Kwong P C; Rubin L A; Peacocke M; Willard H F; Siminovitch K A
CS Department of Medicine, Toronto Western Hospital, Ontario, Canada.
SO HUMAN GENETICS, (1989 Oct) 83 (3) 227-30.
Journal code: GED. ISSN: 0340-6717.
CY GERMANY, WEST: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199001

L5 ANSWER 30 OF 82 MEDLINE DUPLICATE 21
AN 89382034 MEDLINE
DN 89382034
TI Gingival fibroblasts degrade type I collagen films when stimulated with tumor necrosis factor and interleukin 1: evidence that breakdown is mediated by **metalloproteinases**.
AU Meikle M C; Atkinson S J; Ward R V; Murphy G; Reynolds J J
SO JOURNAL OF PERIODONTAL RESEARCH, (1989 May) 24 (3) 207-13.
Journal code: JMQ. ISSN: 0022-3484.
CY Denmark
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Dental Journals
EM 198912

L5 ANSWER 31 OF 82 MEDLINE DUPLICATE 22
AN 90104231 MEDLINE
DN 90104231
TI Fragments of human fibroblast collagenase. Purification and characterization.
AU Clark I M; Cawston T E
CS Rheumatology Research Unit, Addenbrooke's Hospital, Cambridge, U.K.
SO BIOCHEMICAL JOURNAL, (1989 Oct 1) 263 (1) 201-6.
Journal code: 9YO. ISSN: 0264-6021.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199004

L5 ANSWER 32 OF 82 MEDLINE DUPLICATE 23
AN 89263367 MEDLINE
DN 89263367
TI [Natural inhibitor of **metalloproteinases**: structural and functional study].
Inhibiteur naturel des **metalloproteinases**: etude structurale et fonctionnelle.
AU Faucher D; Lelièvre Y; Boiziau J; Cornet P; Cartwright T
CS Rhone-Poulenc Sante (CRMA), Site de Recherche de Monts, France.
SO PATHOLOGIE BIOLOGIE, (1989 Mar) 37 (3) 199-205.
Journal code: OSG. ISSN: 0369-8114.
CY France

DT Journal; Article; (JOURNAL ARTICLE)
LA French
FS Priority Journals
EM 198909

L5 ANSWER 33 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 89:236476 BIOSIS
DN BR36:114960
TI EFFECTS OF RECOMBINANT **TIMP** ON BONE RESORPTION BY ISOLATED
OSTEOCLASTS.
AU SHIMIZU H; SAKAMOTO M; SAKAMOTO S
CS HARV. SCH. DENTAL MED., BOSTON, MASS., USA.
SO 18TH ANNUAL SESSION OF THE AMERICAN ASSOCIATION FOR DENTAL RESEARCH,
SAN FRANCISCO, CALIFORNIA, USA, MARCH 15-19, 1989. J DENT RES 68
(SPEC. ISSUE). 1989. 193. CODEN: JDREAF ISSN: 0022-0345
DT Conference
LA English

L5 ANSWER 34 OF 82 MEDLINE DUPLICATE 24
AN 90023570 MEDLINE
DN 90023570
TI Increased immunostaining of collagenase and **TIMP** in
eruptive xanthoma.
AU Childers J W; Stricklin G P
CS Section of Dermatology, Medical Service VA Medical Center,
Nashville, TN 37212.
SO AMERICAN JOURNAL OF THE MEDICAL SCIENCES, (1989 Sep) 298
(3) 172-6.
Journal code: 3L2. ISSN: 0002-9629.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199001

L5 ANSWER 35 OF 82 MEDLINE DUPLICATE 25
AN 90005712 MEDLINE
DN 90005712
TI Replicative senescence of human skin fibroblasts correlates with a
loss of regulation and overexpression of collagenase activity.
AU West M D; Pereira-Smith O M; Smith J R
CS Roy M. and Phyllis Gough Huffington Center on Aging, Baylor College
of Medicine, Houston, Texas 77030.
NC AG-04749 (NIA)
AG-05333 (NIA)
POL-AG-07123 (NIA)
SO EXPERIMENTAL CELL RESEARCH, (1989 Sep) 184 (1) 138-47.
Journal code: EPB. ISSN: 0014-4827.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199001

L5 ANSWER 36 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 90:38514 BIOSIS
DN BR38:17744
TI **TIMP**-2 COMPLETE PRIMARY STRUCTURE OF A NOVEL MEMBER OF THE
TIMP FAMILY.
AU STETLER-STEVENSON W G; KRUTZSCH H; LIOTTA L A
CS LAB. PATHOL., NATL. CANCER INST., BETHESDA, MD. 20879, USA.
SO TWENTY-NINTH ANNUAL MEETING OF THE AMERICAN SOCIETY FOR CELL BIOLOGY,
HOUSTON, TEXAS, USA, NOVEMBER 5-9, 1989. J CELL BIOL 109 (4 PART 2).
1989. 136A. CODEN: JCLBA3 ISSN: 0021-9525
DT Conference

LA English

L5 ANSWER 37 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 90:38512 BIOSIS
DN BR38:17742
TI TRANSCRIPTIONAL CONTROL OF COLLAGENASE AND **TIMP** PRODUCTION
BY THE HUMAN MONOCYTIC CELL LINE U937.
AU SHAPIRO S D; PARKS W C; LEY T J; KAHN A J; PARTRIDGE N; CAMPBELL E J;
WELGUS H G
CS JEWISH HOSP. AT WASHINGTON UNIV. MED. CENT., ST. LOUIS, MO.
SO TWENTY-NINTH ANNUAL MEETING OF THE AMERICAN SOCIETY FOR CELL BIOLOGY,
HOUSTON, TEXAS, USA, NOVEMBER 5-9, 1989. J CELL BIOL 109 (4 PART 2).
1989. 135A. CODEN: JCLBA3 ISSN: 0021-9525
DT Conference
LA English

L5 ANSWER 38 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 89:401034 BIOSIS
DN BA88:70459
TI A HIGH MOLECULAR WEIGHT COLLAGENASE INHIBITOR MADE BY RABBIT
CHONDROCYTES IN CELL CULTURE.
AU MORRIS G M
CS DEP. PHARMACOL., STATE UNIV. NEW YORK STONY BROOK, STONY BROOK, N.Y.
11794-8651, USA.
SO MATRIX 9 (2). 1989. 127-134. CODEN: MTRXEH
LA English

L5 ANSWER 39 OF 82 MEDLINE DUPLICATE 26
AN 90057454 MEDLINE
DN 90057454
TI Type I collagen degradation by mouse calvarial osteoblasts
stimulated with 1,25-dihydroxyvitamin D-3: evidence for a
plasminogen-plasmin-**metalloproteinase** activation cascade.
AU Thomson B M; Atkinson S J; McGarrity A M; Hembry R M; Reynolds J J;
Meikle M C
CS Cell Physiology Department, Strangeways Research Laboratory, Worts
Causeway, Cambridge, U.K.
SO BIOCHIMICA ET BIOPHYSICA ACTA, (1989 Nov 20) 1014 (2)
125-32.
Journal code: AOW. ISSN: 0006-3002.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199003

L5 ANSWER 40 OF 82 MEDLINE DUPLICATE 27
AN 89292024 MEDLINE
DN 89292024
TI Down-regulation of proteolytic activity in 12-O-tetradecanoyl-
phorbol-13-acetate-induced K562 leukemia cell cultures: depletion of
active urokinase by excess type 1 plasminogen activator inhibitor.
AU Alitalo R; Andersson L C; Tapiovaara H; Sistonen L; Vaheri A;
Stephens R
CS Transplantation Laboratory, University of Helsinki, Finland.
SO JOURNAL OF CELLULAR PHYSIOLOGY, (1989 Jul) 140 (1) 119-30.
Journal code: HNB. ISSN: 0021-9541.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198910

L5 ANSWER 41 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 90:24704 BIOSIS

DN BA89:11670
TI **METALLOPROTEINASES** ARE NOT INVOLVED IN THE PHAGOCYTOSIS OF
COLLAGEN FIBRILS BY FIBROBLASTS.
AU EVERTS V; HEMBRY R M; REYNOLDS J J; BEERTSEN W
CS LAB. HISTOL. CELL BIOL., ACAD. MED. CENT., MEIBERGDREEF 15, 1105 AZ
AMSTERDAM, NETHERLANDS.
SO MATRIX 9 (4). 1989. 66-76. CODEN: MTRXEH
LA English

L5 ANSWER 42 OF 82 MEDLINE
AN 90107445 MEDLINE
DN 90107445
TI Expression of genes for non-collagenous proteins during embryonic
bone formation.
AU Nomura S; Wills A J; Edwards D R; Heath J K; Hogan B L
CS Department of Cell Biology, Vanderbilt University Medical School,
Nashville, TN 37232.
SO CONNECTIVE TISSUE RESEARCH, (1989) 21 (1-4) 31-5;
discussion 36-9. Ref: 22
Journal code: DQH. ISSN: 0300-8207.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199004

L5 ANSWER 43 OF 82 MEDLINE DUPLICATE 28
AN 88327732 MEDLINE
DN 88327732
TI Inhibition by human recombinant tissue inhibitor of
metalloproteinases of human amnion invasion and lung
colonization by murine B16-F10 melanoma cells.
AU Schultz R M; Silberman S; Persky B; Bajkowski A S; Carmichael D F
CS Department of Biochemistry, Loyola University of Chicago, Stritch
School of Medicine, Maywood, Illinois 60153.
NC CA43305 (NCI)
CA44659 (NCI)
SO CANCER RESEARCH, (1988 Oct 1) 48 (19) 5539-45.
Journal code: CNF. ISSN: 0008-5472.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198812

L5 ANSWER 44 OF 82 MEDLINE DUPLICATE 29
AN 89067507 MEDLINE
DN 89067507
TI Selective up-regulation of human alveolar macrophage collagenase
production by lipopolysaccharide and comparison to collagenase
production by fibroblasts.
AU Cury J D; Campbell E J; Lazarus C J; Albin R J; Welgus H G
CS Department of Medicine, Jewish Hospital, St. Louis, MO 63110.
NC AM35805 (NIADDK)
HL29594 (NHLBI)
5T32-HL07317 (NHLBI)
+
SO JOURNAL OF IMMUNOLOGY, (1988 Dec 15) 141 (12) 4306-12.
Journal code: IFB. ISSN: 0022-1767.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals

EM 198903

L5 ANSWER 45 OF 82 MEDLINE

DUPLICATE 30

AN 89096910 MEDLINE

DN 89096910

TI Presence of transcription regulatory elements within an intron of the virus-inducible murine **TIMP** gene.

AU Coulombe B; Ponton A; Daigneault L; Williams B R; Skup D

CS Institut du Cancer de Montreal, Quebec, Canada.

SO MOLECULAR AND CELLULAR BIOLOGY, (1988 Aug) 8 (8) 3227-34.

Journal code: NGY. ISSN: 0270-7306.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

OS GENBANK-M21162

EM 198904

L5 ANSWER 46 OF 82 MEDLINE

DUPLICATE 31

AN 88222411 MEDLINE

DN 88222411

TI K562 cells produce and respond to human erythroid-potentiating activity.

AU Avalos B R; Kaufman S E; Tomonaga M; Williams R E; Golde D W; Gasson J C

CS Department of Medicine, UCLA School of Medicine.

NC CA30388 (NCI)

CA32737 (NCI)

CA40163 (NCI)

SO BLOOD, (1988 Jun) 71 (6) 1720-5.

Journal code: A8G. ISSN: 0006-4971.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals

EM 198809

L5 ANSWER 47 OF 82 MEDLINE

DUPLICATE 32

AN 88087284 MEDLINE

DN 88087284

TI In vitro synthesis of the active tissue inhibitor of **metalloproteinases** encoded by a complementary DNA from virus-infected murine fibroblasts.

AU Coulombe B; Skup D

CS Institut du Cancer de Montreal, Quebec, Canada.

SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1988 Jan 25) 263 (3) 1439-43.

Journal code: HIV. ISSN: 0021-9258.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals; Cancer Journals

EM 198804

L5 ANSWER 48 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS

AN 89:192412 BIOSIS

DN BR36:92861

TI TISSUE INHIBITOR OF **METALLOPROTEINASES** **TIMP** INFLUENCES DEVELOPMENT OF PERI-IMPLANTATION MOUSE EMBRYOS IN CULTURE.

AU BEHRENDTSEN O; ALEXANDER C A; WERB Z

CS LAB. RADIOBIOL. ENVIRON. HEALTH, UNIV. CALIFORNIA, SAN FRANCISCO, CALIF. 94143-0750.

SO JOINT MEETING OF THE AMERICAN SOCIETY FOR CELL BIOLOGY AND THE AMERICAN SOCIETY FOR BIOCHEMISTRY AND MOLECULAR BIOLOGY, SAN FRANCISCO, CALIFORNIA, USA, JANUARY 29-FEBRUARY 2, 1989. J CELL BIOL

DT Conference
LA English

L5 ANSWER 49 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 88:345119 BIOSIS
DN BR35:39961
TI MODULATION OF THE COLLAGENASE INHIBITOR **TIMP** MESSENGER RNA
LEVELS BY ANTI-SENSE RNA INFLUENCES THE INVASIVENESS OF MOUSE 3T3
CELLS.
AU KHOKHA R; WATERHOUSE P; YAGEL S; LALA P K; NORTON G; DENHARDT D T
CS CANCER RES. LAB., UNIV. WESTERN ONTARIO, LONDON, ONT. N6A5B7 CANADA.
SO 79TH ANNUAL MEETING OF THE AMERICAN ASSOCIATION FOR CANCER RESEARCH,
NEW ORLEANS, LOUISIANA, USA, MAY 25-28, 1988. PROC AM ASSOC CANCER
RES ANNU MEET 29 (0). 1988. 439. CODEN: PAMREA
DT Conference
LA English

L5 ANSWER 50 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 89:171617 BIOSIS
DN BR36:82858
TI GENES FOR EXTRACELLULAR MATRIX-DEGRADING **METALLOPROTEINASES**
AND THEIR INHIBITOR **TIMP** FUNCTION DURING EARLY MAMMALIAN
DEVELOPMENT.
AU BRENNER C A; ADLER R R; RAPPOLEC D A; PEDERSEN R A; BEHRENDTSEN O;
WERB Z
CS LAB. RADIOBIOL. ENVIRON. HEALTH, UNIV. CALIFORNIA, SAN FRANCISCO,
CALIF. 94143-0750.
SO JOINT MEETING OF THE AMERICAN SOCIETY FOR CELL BIOLOGY AND THE
AMERICAN SOCIETY FOR BIOCHEMISTRY AND MOLECULAR BIOLOGY, SAN
FRANCISCO, CALIFORNIA, USA, JANUARY 29-FEBRUARY 2, 1989. J CELL BIOL
107 (6 PART 3). 1988. 380A. CODEN: JCLBA3 ISSN: 0021-9525
DT Conference
LA English

L5 ANSWER 51 OF 82 MEDLINE
AN 89110656 MEDLINE
DN 89110656
TI Identification of matrix metalloendoproteinase inhibitor (
TIMP) in human parotid and submandibular saliva: partial
purification and characterization.
AU Drouin L; Overall C M; Sodek J
SO JOURNAL OF PERIODONTAL RESEARCH, (1988 Nov) 23 (6) 370-7.
Journal code: JMQ. ISSN: 0022-3484.
CY Denmark
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Dental Journals
EM 198905

L5 ANSWER 52 OF 82 MEDLINE
AN 88193653 MEDLINE
DN 88193653
TI Role of collagenase in colonic anastomoses: a reappraisal.
AU Chowcat N L; Savage F J; Hembry R M; Boulos P B
CS Department of Surgery, University College London, UK.
SO BRITISH JOURNAL OF SURGERY, (1988 Apr) 75 (4) 330-4.
Journal code: B34. ISSN: 0007-1323.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals
EM 198808

L5 ANSWER 53 OF 82 MEDLINE

AN 88271651 MEDLINE
 DN 88271651
 TI Human recombinant interleukin-1 alpha-mediated stimulation of procollagenase production and suppression of biosynthesis of tissue inhibitor of **metalloproteinases** in rabbit uterine cervical fibroblasts.
 AU Ito A; Goshowaki H; Sato T; Mori Y; Yamashita K; Hayakawa T; Nagase H
 CS Department of Biochemistry, Tokyo College of Pharmacy, Japan.
 NC AR 39189 (NIAMS)
 SO FEBS LETTERS, (1988 Jul 18) 234 (2) 326-30.
 Journal code: EUH. ISSN: 0014-5793.
 CY Netherlands
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals; Cancer Journals
 EM 198810

L5 ANSWER 54 OF 82 MEDLINE DUPLICATE 33
 AN 88115581 MEDLINE
 DN 88115581
 TI Modulation of fibroblast functions by interleukin 1: increased steady-state accumulation of type I procollagen messenger RNAs and stimulation of other functions but not chemotaxis by human recombinant interleukin 1 alpha and beta.
 AU Postlethwaite A E; Raghov R; Stricklin G P; Poppleton H; Seyer J M; Kang A H
 CS Department of Medicine, University of Tennessee, Memphis 38163.
 NC AM 16506 (NIADDK)
 AM 26034 (NIADDK)
 SO JOURNAL OF CELL BIOLOGY, (1988 Feb) 106 (2) 311-8.
 Journal code: HMV. ISSN: 0021-9525.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals; Cancer Journals
 EM 198805

L5 ANSWER 55 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
 AN 88:370588 BIOSIS
 DN BR35:55201
 TI MODULATION OF THE COLLAGENASE INHIBITOR **TIMP** MESSENGER RNA LEVELS BY ANTI-SENSE RNA INFLUENCES THE INVASIVENESS OF MOUSE 3T3 CELLS.
 AU KHOKHA R; WATERHOUSE P; YAGEL S; LALA P K; NOTRON G; DENHARDT D T
 CS CANCER RES. LAB., UNIV. WEST. ONT., LONDON, ONT., CAN.
 SO SYMPOSIUM ON CELLULAR PROTEASES AND CONTROL MECHANISMS HELD AT THE 17TH ANNUAL UCLA (UNIVERSITY OF CALIFORNIA-LOS ANGELES) MEETING ON MOLECULAR AND CELLULAR BIOLOGY, LAKE TAHOE, CALIFORNIA, USA, FEBRUARY 21-26, 1988. J CELL BIOCHEM SUPPL 0 (12 PART B). 1988. 290. CODEN: JCBSD7
 DT Conference
 LA English

L5 ANSWER 56 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
 AN 88:238354 BIOSIS
 DN BR34:120874
 TI IDENTIFICATION AND PURIFICATION OF COLLAGENASE INHIBITOR **TIMP** IN HUMAN PAROTID AND SUBMANDIBULAR SALIVA.
 AU DROUIN L; OVERALL C M; SODEK J
 CS MED. RES. COUNCIL GROUP PERIODONTAL PHYSIOL., UNIV. TORONTO, TORONTO, ONTARIO, CAN.
 SO 66TH GENERAL SESSION OF THE INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH, 17TH ANNUAL SESSION OF THE AMERICAN ASSOCIATION FOR DENTAL RESEARCH, AND 12TH ANNUAL MEETING OF THE CANADIAN ASSOCIATION FOR

DT Conference
LA English

L5 ANSWER 57 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 88:238145 BIOSIS
DN BR34:120665
TI POLYCLONAL ANTIBODIES TO 3 SYNTHETIC PEPTIDES DERIVED FROM THE
CONSENSUS SEQUENCE OF **TIMP**.
AU BODDEN M K; BIRKEDAL-HANSEN H
CS UNIV. ALA. SCH. DENT., BIRMINGHAM, ALA.
SO 66TH GENERAL SESSION OF THE INTERNATIONAL ASSOCIATION FOR DENTAL
RESEARCH, 17TH ANNUAL SESSION OF THE AMERICAN ASSOCIATION FOR DENTAL
RESEARCH, AND 12TH ANNUAL MEETING OF THE CANADIAN ASSOCIATION FOR
DENTAL RESEARCH, MONTREAL, QUEBEC, CANADA, MARCH 9-13, 1988. J DENT
RES 67 (SPEC. ISSUE MAR.). 1988. 210. CODEN: JDREAF ISSN: 0022-0345
DT Conference
LA English

L5 ANSWER 58 OF 82 MEDLINE DUPLICATE 34
AN 89138439 MEDLINE
DN 89138439
TI Multilocus molecular mapping of the mouse X chromosome.
AU Mullins L J; Grant S G; Stephenson D A; Chapman V M
CS Roswell Park Memorial Institute, Molecular and Cellular Biology
Department, Buffalo, New York 14263.
NC GM33160 (NIGMS)
GM24125 (NIGMS)
SO GENOMICS, (1988 Oct) 3 (3) 187-94.
Journal code: GEN. ISSN: 0888-7543.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198906

L5 ANSWER 59 OF 82 MEDLINE
AN 88152211 MEDLINE
DN 88152211
TI Inactivation of tissue inhibitor of **metalloproteinases** by
neutrophil elastase and other serine proteinases.
AU Okada Y; Watanabe S; Nakanishi I; Kishi J; Hayakawa T; Watorek W;
Travis J; Nagase H
CS Department of Pathology, School of Medicine, Kanazawa University,
Japan.
SO FEBS LETTERS, (1988 Feb 29) 229 (1) 157-60.
Journal code: EUH. ISSN: 0014-5793.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198806

L5 ANSWER 60 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 88:368671 BIOSIS
DN BR35:53284
TI PROFILE OF ACID AND NEUTRAL **METALLOPROTEINASES** IN
OSTEOARTHRITIC OA AND IN CONTROL CARTILAGES COMPARED TO SPECIFIC
TISSUE INHIBITOR OF **METALLOPROTEINASE TIMP**.
AU DEAN D; PELLETIER J-P; MARTEL-PELLETIER J; HOWELL D S; WOESSNER J F
CS V.A. MED. CENT., DEP. MED., UNIV. MIAMI SCH. MED., MIAMI, FLA. 33150.
SO 52ND ANNUAL MEETING OF THE AMERICAN RHEUMATISM ASSOCIATION, HOUSTON,
TEXAS, USA, MAY 23-28, 1988. ARTHRITIS RHEUM 31 (4 SUPPL.). 1988.
S33. CODEN: ARHEAW ISSN: 0004-3591

DT Conference
LA English

L5 ANSWER 61 OF 82 MEDLINE
AN 88058939 MEDLINE
DN 88058939
TI Monocyte procollagenase and tissue inhibitor of
metalloproteinases. Identification, characterization, and
regulation of secretion.
AU Campbell E J; Cury J D; Lazarus C J; Welgus H G
CS Department of Medicine, Jewish Hospital at Washington University
Medical Center, St. Louis, Missouri 63110.
NC HL30341 (NHLBI)
AM35805 (NIADDK)
HL07317 (NHLBI)
+
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1987 Nov 25) 262 (33)
15862-8.
Journal code: HIV. ISSN: 0021-9258.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198803

DUPLICATE 35

L5 ANSWER 62 OF 82 MEDLINE
AN 87231017 MEDLINE
DN 87231017
TI Assignment of the **TIMP** gene to the murine X-chromosome
using an inter-species cross.
AU Jackson I J; LeCras T D; Docherty A J
SO NUCLEIC ACIDS RESEARCH, (1987 May 26) 15 (10) 4357.
Journal code: O8L. ISSN: 0305-1048.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198709

L5 ANSWER 63 OF 82 MEDLINE
AN 87306864 MEDLINE
DN 87306864
TI Bacterial antigens induce collagenase and prostaglandin E2 synthesis
in human gingival fibroblasts through a primary effect on
circulating mononuclear cells.
AU Heath J K; Atkinson S J; Hembry R M; Reynolds J J; Meikle M C
SO INFECTION AND IMMUNITY, (1987 Sep) 55 (9) 2148-54.
Journal code: GO7. ISSN: 0019-9567.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198712

DUPLICATE 36

L5 ANSWER 64 OF 82 MEDLINE
AN 88004396 MEDLINE
DN 88004396
TI Transforming growth factor beta modulates the expression of
collagenase and **metalloproteinase** inhibitor.
AU Edwards D R; Murphy G; Reynolds J J; Whitham S E; Docherty A J;
Angel P; Heath J K
CS Department of Biochemistry, University of Oxford, UK..
SO EMBO JOURNAL, (1987 Jul) 6 (7) 1899-904.
Journal code: EMB. ISSN: 0261-4189.
CY ENGLAND: United Kingdom

DUPLICATE 37

DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198801

L5 ANSWER 65 OF 82 MEDLINE DUPLICATE 38
AN 87239677 MEDLINE
DN 87239677
TI Human alveolar macrophages secrete an inhibitor of
metalloproteinase elastase.
AU Albin R J; Senior R M; Welgus H G; Connolly N L; Campbell E J
NC HL-29594 (NHLBI)
HL-30341 (NHLBI)
HL-07317 (NHLBI)
+
SO AMERICAN REVIEW OF RESPIRATORY DISEASE, (1987 Jun) 135 (6)
1281-5.
Journal code: 426. ISSN: 0003-0805.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 198709

L5 ANSWER 66 OF 82 MEDLINE DUPLICATE 39
AN 88059565 MEDLINE
DN 88059565
TI Regulation of the expression of tissue inhibitor of
metalloproteinases and collagenase by retinoids and
glucocorticoids in human fibroblasts.
AU Clark S D; Kobayashi D K; Welgus H G
CS Department of Medicine, Jewish Hospital, Washington University
Medical Center, St. Louis, Missouri 63110.
NC AM 35805 (NIADDK)
TO-AM 07284 (NIADDK)
AM 01525 (NIADDK)
SO JOURNAL OF CLINICAL INVESTIGATION, (1987 Nov) 80 (5)
1280-8.
Journal code: HS7. ISSN: 0021-9738.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals
EM 198803

L5 ANSWER 67 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 88:211054 BIOSIS
DN BR34:104064
TI A VIRUS INDUCIBLE ELEMENT CONTAINED WITHIN AN INTRON OF THE MURINE
TISSUE INHIBITOR OF **METALLOPROTEINASES TIMP** GENE.
AU COULOMBE B; PONTON A; WILLIAMS B R G; SKUP D
CS INST. DU CANCER DE MONTREAL, MONTREAL, QUEBEC, CANADA H2L 4M1.
SO 1987 INTERNATIONAL SOCIETY FOR INTERFERON RESEARCH MEETING ON THE
INTERFERON SYSTEM, WASHINGTON, D.C., USA, NOVEMBER 2-6, 1987. J
INTERFERON RES 7 (6). 1987. 749. CODEN: JIREDJ ISSN: 0197-8357
DT Conference
LA English

L5 ANSWER 68 OF 82 MEDLINE DUPLICATE 40
AN 87218524 MEDLINE
DN 87218524
TI Characterization and expression of a murine gene homologous to human
EPA/**TIMP**: a virus-induced gene in the mouse.
AU Gewert D R; Coulombe B; Castellino M; Skup D; Williams B R
SO EMBO JOURNAL, (1987 Mar) 6 (3) 651-7.

Journal code: EMT. ISSN: 0261-4189.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198709

L5 ANSWER 69 OF 82 MEDLINE DUPLICATE 41
AN 88076930 MEDLINE
DN 88076930

TI Degradation of type I collagen films by mouse osteoblasts is stimulated by 1,25 dihydroxyvitamin D3 and inhibited by human recombinant **TIMP** (tissue inhibitor of **metalloproteinases**).

AU Thomson B M; Atkinson S J; Reynolds J J; Meikle M C
CS Cell Physiology, Strangeways Research Laboratory, Worts Causeway, Cambridge.

SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (1987 Oct 29) 148 (2) 596-602.

Journal code: 9Y8. ISSN: 0006-291X.

CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198803

L5 ANSWER 70 OF 82 MEDLINE DUPLICATE 42
AN 88105457 MEDLINE
DN 88105457

TI **Metalloproteinases** in endochondral bone formation: appearance of tissue inhibitor-resistant **metalloproteinases**

AU Mikuni-Takagaki Y; Cheng Y S
CS Developmental Biology Laboratory of the Medical Services, Massachusetts General Hospital, Boston 02114.

NC AM-3564 (NIADDK)
HD-19836 (NICHHD)

SO ARCHIVES OF BIOCHEMISTRY AND BIOPHYSICS, (1987 Dec) 259 (2) 576-88.

Journal code: 6SK. ISSN: 0003-9861.

CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198804

L5 ANSWER 71 OF 82 MEDLINE DUPLICATE 43
AN 88007986 MEDLINE
DN 88007986

TI Tissue inhibitor of **metalloproteinases** (**TIMP**) regulates extracellular type I collagen degradation by chondrocytes and endothelial cells.

AU Gavrilovic J; Hembry R M; Reynolds J J; Murphy G
CS Department of Cell Physiology, Strangeways Research Laboratory, Cambridge, England.

SO JOURNAL OF CELL SCIENCE, (1987 Mar) 87 (Pt 2) 357-62.

Journal code: HNK. ISSN: 0021-9533.

CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198801

L5 ANSWER 72 OF 82 MEDLINE DUPLICATE 44
AN 88025983 MEDLINE

DN 88025983
TI Paired serum and synovial fluid values of alpha₂-macroglobulin and **TIMP** in rheumatoid arthritis.
AU Cawston T E; McLaughlin P; Hazleman B L
CS Rheumatology Research Unit, Addenbrooke's Hospital, Cambridge, UK.
SO BRITISH JOURNAL OF RHEUMATOLOGY, (1987 Oct) 26 (5) 354-8.
Journal code: BJT. ISSN: 0263-7103.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 198802

L5 ANSWER 73 OF 82 MEDLINE
AN 88075826 MEDLINE
DN 88075826
TI Chromosomal assignment of the gene encoding the human tissue inhibitor of **metalloproteinases** to Xp11.1-p11.4.
AU Spurr N K; Goodfellow P N; Docherty A J
CS Human Genetic Resources Laboratory, Imperial Cancer Research Fund, Clare Hall Laboratories, South Mimms, Herts..
SO ANNALS OF HUMAN GENETICS, (1987 Jul) 51 (Pt 3) 189-94.
Journal code: 58C. ISSN: 0003-4800.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198803

L5 ANSWER 74 OF 82 MEDLINE
AN 87311550 MEDLINE
DN 87311550
TI Levels of **metalloproteases** and tissue inhibitor of **metalloproteases** in human osteoarthritic cartilage.
AU Dean D D; Azzo W; Martel-Pelletier J; Pelletier J P; Woessner J F Jr
NC AM-16940 (NIADDK)
SO JOURNAL OF RHEUMATOLOGY, (1987 May) 14 Spec No 43-4.
Journal code: JWX. ISSN: 0315-162X.
CY Canada
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198712

L5 ANSWER 75 OF 82 MEDLINE
AN 88026847 MEDLINE
DN 88026847
TI Production of a factor by cultured human heart valves that is immunologically related to interleukin 1.
AU Henney A M; Decker R S
CS Strangeways Research Laboratory, Cambridge, UK..
SO CARDIOVASCULAR RESEARCH, (1987 Jan) 21 (1) 21-7.
Journal code: COR. ISSN: 0008-6363.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198802

L5 ANSWER 76 OF 82 MEDLINE
AN 86230918 MEDLINE
DN 86230918
TI Physiological relevance of erythroid-potentiating activity of **TIMP** [letter].
AU Stricklin G P; Welgus H G

SO NATURE, (1986 Jun 5-11) 321 (6070) 628.
Journal code: ISSN: 0028-0836.
CY ENGLAND: United Kingdom
DT Letter
LA English
FS Cancer Journals; Priority Journals
EM 198609

L5 ANSWER 77 OF 82 MEDLINE
AN 87066797 MEDLINE
DN 87066797
TI RFLP detected by an X-linked cDNA encoding erythroid-potentiating activity/tissue inhibitor of **metalloproteinase** (EPA/**TIMP**).

AU Durfy S J; Clark S C; Williams B R; Willard H F
SO NUCLEIC ACIDS RESEARCH, (1986 Nov 25) 14 (22) 9226.
Journal code: O8L. ISSN: 0305-1048.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198703

L5 ANSWER 78 OF 82 BIOSIS COPYRIGHT 1998 BIOSIS
AN 87:158402 BIOSIS
DN BR32:76529
TI IMMUNOHISTOCHEMICAL LOCALIZATION OF COLLAGENASE AND TISSUE INHIBITOR OF **METALLOPROTEINASES TIMP** IN BRAIN TUMORS.
AU HALAKA A N; ELLIS E; BIRD C C; HEMBRY R M; REYNOLDS J J
CS LEEDS.
SO 108TH MEETING OF THE SOCIETY OF BRITISH NEUROLOGICAL SURGEONS, CAMBRIDGE, ENGLAND, APR. 3-4, 1986. J NEUROL NEUROSURG PSYCHIATRY 49 (11). 1986. 1328. CODEN: JNNPAU ISSN: 0022-3050
DT Conference
LA English

L5 ANSWER 79 OF 82 MEDLINE DUPLICATE 45
AN 87070521 MEDLINE
DN 87070521
TI Tissue inhibitor of **metalloproteinases** and collagenase inhibitory activity in lung secretions from patients with chronic obstructive bronchitis: effect of corticosteroid treatment.
AU Burnett D; Reynolds J J; Ward R V; Afford S C; Stockley R A
SO THORAX, (1986 Oct) 41 (10) 740-5.
Journal code: VQW. ISSN: 0040-6376.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198703

L5 ANSWER 80 OF 82 MEDLINE DUPLICATE 46
AN 87100023 MEDLINE
DN 87100023
TI Rapid purification of tissue inhibitor of **metalloproteinases** from human plasma and identification as a gamma-serum protein.
AU Cawston T E; Noble D N; Murphy G; Smith A J; Woodley C; Hazleman B
SO BIOCHEMICAL JOURNAL, (1986 Sep 15) 238 (3) 677-82.
Journal code: 9YO. ISSN: 0264-6021.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198704

LS ANSWER 81 OF 82 MEDLINE
AN 87049506 MEDLINE
DN 87049506
TI Immunolocalization of collagenase and tissue inhibitor of
metalloproteinases (TIMP) in hypertrophic scar
tissue.
AU Hembry R M; Ehrlich H P
NC GM 32705 (NIGMS)
GM 21700 (NIGMS)
SO BRITISH JOURNAL OF DERMATOLOGY, (1986 Oct) 115 (4) 409-20.
Journal code: AW0. ISSN: 0007-0963.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198703

LS ANSWER 82 OF 82 MEDLINE
AN 86321251 MEDLINE
DN 86321251
TI Inhibition of production and action of tissue
metalloproteinases.
AU Reynolds J J
SO ANNALES DE BIOLOGIE CLINIQUE, (1986) 44 (2) 188-94. Ref:
69
Journal code: 4ZS. ISSN: 0003-3898.
CY France
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LA English
FS Priority Journals
EM 198612